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Editor AMERICAN DRUGGIST:

Find inclosed money order to pay my subscription to the DRUGGIST AND RECORD from January to December, 1894.

Since the introduction of the quiz box it is more interesting than ever, and I consider the paper indispensable to the enterprising druggist.

T. J. DERRYBERRY.

CENTERVILLE TENN.

AN INTERESTING NUMBER.

READERS of THE AMERICAN DRUGGIST AND PHARMACEUTICAL RECORD are to be congratulated on the wealth of interesting matter that is placed before them for perusal in this issue. The best pharmaceutical writers of two continents have been laid under contribution to supply articles on pharmacy in all its varied aspects.

Pharmacists who are interested in the art as pursued in Paris—the Mecca of all good Americans—will read STERLING HEILIG'S illustrated article on "Paris Pharmacies" with real interest. HEILIG knows Paris as only a journalist of Bohemian instincts can, and his information concerning the Paris pharmacist is thoroughly up to date.

"A. HAWK EYE KODAK" contributes a valuable article on a profitable side line—photographic supplies. The desirability of keeping a small assortment of the photographic chemicals and apparatus in most common use has been already recognized by a number of Gotham pharmacists; and their experience has been that capital invested in this way has produced fair returns.

FRANK EDEL is a capable exponent of working methods in the field of practical pharmacy, and his illustrated article on "Tablet Triturates" will well repay perusal. He shows how the pharmacist can be independent to a certain extent of the manufacturing firms in the manufacture of tablet triturates, and at the same time turn out better work. When pharmacists learn to make their own tablets it will not be necessary, as Dr. MCFERRAND has wisely observed, for them to buy one hundred tablets to fill a prescription of ten.

Of equal interest will be the article on elixir formulas, contributed by ELBERT E. FISHER. Coming from a practical experimenter who has given the subject careful thought, the formulas can be relied upon to produce satisfactory compounds.

"How to Prevent the Accumulation of Dead Stock" is cleverly told by JNO. W. BALLARD in an article in which he relates his experience with the transfer of a dead stock of drugs for some Kansas real estate.

"The Pharmacist as a Citizen" and the advantages which accrue to him from taking a prominent part in the terests of the place are discussed in a well-considered article by R. J. HARDY.

The many special articles cover a wide range of subjects and will come as a surprise to the large number of pharmacists outside of our regular subscribers to whom this issue of the journal will be sent.

SELF HELP.

THE Interstate Retail Druggists' League is making steady and substantial progress. The meeting of the New York City branch last week was an unusually interesting one both in regard to the number of members present and the character of the discussions. The secretary reported that the signatures of some 400 pharmacists had been secured to the rebate plan. Similarly cheering reports are to hand from other branches of the League, and it would seem that pharmacists are at last becoming awakened to the necessity of organization as a means of self protection.

On page 199 President Stiles of the Apothecaries' Guild of Boston and vicinity makes a stirring appeal to the drug trade of the country to organize. This appeal is that of a practical business man to practical business men. It is not written from the dilettante point of view but with a thorough and practical knowledge of the subject treated of.

There is no visionary aspirations for the impossible in the League and its plans, but a clear-headed, far-sighted systemization of forces, which, if dissipated in ununited efforts, will be utterly wasted, but which, if co-ordinated and unitedly and intelligently directed will undoubtedly do much toward improving the commercial status of pharmacists all over the United States.

We have given the Interstate Retail Druggists' League a hearty support; as we are thoroughly convinced not only of the desirability of carrying out its plans but also of their feasibility and also of the ability and inclination of the present officers to execute them. No matter how able and enthusiastic these leaders may be, to be assured of success they must have the active support of the retail trade.

They do not ask you to help *them*, they ask you to help *yourself*.

Will you do it?

THE RETURNING OF GOODS FROM A LEGAL STANDPOINT.

THERE is not so very much difference between the legal aspect of returning goods and the moral. If the former were better understood there would be less violation of the latter. The evil is a great, and apparently a growing one. It affects not only the manufacturer, the wholesaler, and the jobber, but the retailer and agent as well, because what the purchaser from the former does, he finds his customers doing with him. Caprice, and not reason, seems to rule the mercantile world.

A contract is a compact, solemn and binding. And a contract of purchase and sale cannot, any more than any other, be broken with impunity. It is a breach of contract and good faith to return, without sufficient justification, goods ordered. Any one can see that a change of mind on the part of the purchaser is no ground for doing such a thing. Nor will raising unreasonable or captious objections authorize it.

The returning of goods once purchased, or ordered, which is practically the same thing if the order be accepted, is only proper, and can be done without incurring legal liability for damages, when the contract made provides for it, as in the case of a "sale or return," or of a "sale upon trial;" when the seller has subsequently agreed to their return; when the seller has failed to furnish what he agreed to, or when, or as, he agreed to; and when the purchaser has become insolvent and it is necessary in order to protect the seller from much greater loss.

A distinction is ever to be kept in mind between absolute and conditional sales. If it is a "sale on trial," the title does not pass until trial and acceptance, actual or implied, although the possession is delivered; being rather a delivery of possession with an option to buy than a sale. If it is a "sale or return," the title passes with the possession, but to be divested if the condition is not performed and the property is returned. If the condition of the sale be that the goods may be returned if they do not prove "satisfactory" to the purchaser, or if the latter is not satisfied with them after trial, the condition must be fully performed; that is, the purchaser must in fact be satisfied or he can return the goods.

Moreover, the courts hold that when goods are manufactured or sold and delivered subject to the approval of the purchaser, it is incumbent upon him, unless he approves, to express disapproval within a reasonable time, or within the time limited by the contract; and the absence of such expression is sufficient evidence of approval, or at least of a waiver of the right to insist upon approval as a condition precedent to a recovery by the seller. The time within which goods must be returned, if at all, may, however, be lengthened by the conduct of the seller or his agent. He cannot shorten it, as by shipping ahead of the date fixed.

When a purchaser returns or declines to receive property sold him without any legal right to do so, the seller has his choice of either one of three methods to indemnify himself; first, he may store or retain the property for the purchaser, and sue him for the entire purchase price; second, he may sell the goods, acting as an agent for that purpose of the purchaser, and recover the difference between the contract price and the price obtained on such resale or, third, he may keep the property as his own, and recover the difference between the market price at the time and place of delivery, and the contract price. But before the seller proceeds to a resale he should manifest his intention to do so by a preliminary notice to the purchaser that he intends to resell, and will hold him liable by the price obtained.

DOSAGE AND THE PHARMACOPŒIA.

SOME years ago C. E. CORCORAN presented a paper to the Kansas City Pharmaceutical Association entitled "Some Suggestions on Revision of the Pharmacopœia." Among other things he called attention to the need of some arbitrary guide in Pharmacopœial dosage, and suggested that a system of rules for the guidance of pharmacists and physicians in the administration of remedies be incorporated in future revisions of the Pharmacopœia. Mr. CORCORAN had evidently given the matter long and careful attention and was able to discuss the subject from all sides. So far as our own experience goes we are quite agreed that Mr. CORCORAN'S suggestion was a wise and practicable one, and we believe his views are also shared by the majority of the pharmacists of this country. This might be more strongly stated without the slightest risk of exaggerating the facts; but the statement as it stands will answer our purpose very well.

But it seems the Committee of Revision does not look at the matter in the same light, and for ten years more we must get our ideas of average or maximum dosage from the Dispensatories and works on therapeutics, where but little uniformity is to be found. This as pharmacists look at it is lamentable. The Pharmacopœia is their standard as to the purity and strength of preparations and they find it difficult to understand why it should not also be the standard of dosage.

Not a day passes without the need of such a standard being felt by the active dispenser. We are all of us familiar with the disparity which exists between the different authorities regarding the maximum dosage of drugs. Most pharmacists would probably consider one-twelfth grain a maximum dose of arsenious acid, though aware that some authorities allow larger doses. No careful pharmacist would allow a dose of one-twelfth grain of atropine to pass him in a prescription, and yet the National Dispensatory says that such doses are given in extreme cases. How is the pharmacist to know when the case is an extreme one?

A prescription which we recall as having come under our observation some years ago called for

Morphine sulph.....gr. xvi
Aquæ.....ʒ ij
M. ft. sol.
Sig.: Teaspoonful as required.

The prescriber was informed of the dangerous character of the prescription but dismissed the dispenser's fears in an airy manner with the information that the dose was intentional and the patient was advised as to the use of the remedy. The physician appeared to be quite satisfied with himself, but the impression left upon the dispenser was that the physician had been guilty of careless prescribing, as the latter should have undoubtedly conveyed some intimation of the unusual character of the case. In Germany the physician who wishes to try an unusual dose is obliged by law to make his intention known by placing certain marks on a prescription.

The subject of dosage is one of great importance not only to physicians and pharmacists but to the public as well. To guard the people against incompetency pharmacy laws have been enacted and State boards of pharmacy in carrying out these laws have examined candidates and granted certificates of competency: but if a knowledge of the largest safe doses of active drugs, or even of ordinary posology, has been required of such candidates we have overlooked the papers in which the questions have appeared. Yet few will take exception to the statement that no one who is ignorant of the largest safe dose of all the active medicinal agents official in the U S Pharmacopœia can be considered a competent pharmacist.

Notwithstanding the great excellence of the U. S. Pharmacopœia as compared with the Pharmacopœias of other nations, it is a well recognized fact that the work has no popularity with the working pharmacists of the country. The existence of two works of so substantial a character as the United States and the National Dispensatories may be responsible in some measure for this unpopularity. But to treat these magnificent commentaries and companions to the Pharmacopœia as rival works does not remedy matters, and it is not recommended that the Pharmacopœia should be enlarged a whit beyond its present dimensions.

If it is desired, then, to make the work truly authoritative and popular it would seem only necessary to append to the descriptions of therapeutic agents the average and maximum doses of each. The wish for th has been very generally ex-

pressed at different times by the members of both of the professions of medicine and pharmacy, and the failure of the Committee of Revision to comply has never been satisfactorily explained.

DO NOT WASTE OPPORTUNITIES.

TO be always the first in the field is a long step toward victory whether in war or commerce. If a physician finds after mentioning one or two new things that he has read about that you already know about them he will come to look upon you as a well posted man. If he finds that you do not know anything about new remedies until he tells you of them he will not place a very high estimate upon your ability as a pharmacist.

The readers of THE AMERICAN DRUGGIST AND PHARMACEUTICAL RECORD get the news of the latest important advances in pharmaceutical science anywhere from two weeks to six months earlier than they could get it from any other pharmaceutical journal in the United States. Too many pharmacists are in the habit of neglecting the opportunity which we place before them of keeping posted up to date. They should remember that it takes comparatively little to either make or mar a reputation. Fall short in two or three instances and you are at once set down by the physician as being behind the times. Whereas, if you happen to be able to answer intelligently the first two or three questions put to you your reputation will be established with that practitioner at least.

Many pharmacists on opening their journals merely glance over the editorials and the market reports and then toss them aside possibly to take up the morning paper. This is an error, for almost every issue of every pharmaceutical journal will be found to contain at least one item likely to prove of practical value and which will well repay the reader for all the time spent in reading the journal.

An unread journal is a wasted opportunity. Do not waste your opportunities.

HYGIENE IN THE PUBLIC SCHOOLS.

A LITTLE learning is a dangerous thing and if that little be distorted by error of the teacher the results are almost sure to be positively disastrous.

The introduction of physiology as a compulsory study in the public schools nas brought out a series of books prepared especially to conform to the provisions of the laws of the various States, in some of which the law requires that a definite proportion of the textbook on physiology, in certain instances as much as one-fourth, shall be devoted to alcohol and tobacco. Many really valuable works on hygiene and physiology are thus shut out from being used and their places filled by books frequently full of the grossest errors of fact. Dr. G. G. GORFF writing of this aspect of the case in *Science* says:

> One also reads that cider drinkers are peculiarly crabbed and cross; that tobacco makes old men ill-natured; that sour milk is unwholesome, cheese indigestible, *pork a meat not fit to eat*, and that bile has the properties of baking soda. Here is a fish story told in the words of a highly commended book: "The Esquimaux who live in Greenland drink one or two quarts of oil, and eat several pounds of candles every day." But see how a story will "grow" even in a scientific textbook. In the next number of the "series," written by the same author, and from the same reliable notes, doubtless, we read: "An Esquimaux consumes about twenty pounds of blubber fat daily, besides drinking several quarts of train oil." What it will be in the next volume, who can tell?

What is really needed in the schools is not so much physiology as hygiene, and to teach this intelligently is necessary that the teachers themselves be first thoroughly grounded in the science before they are put to teaching others.

TOO MUCH LEGISLATION.

MASSACHUSETTS, like her sister States, is compelled to submit to attempts at each session of the legislature to inflict inimical legislation upon the drug trade. This year is no exception to the rule; in fact, "proposed bills" are more abundant than usual. Just now the trade is wrought up over an act which it is said will prove efficient in "regulating the sale of patent or proprietary medicines," which is as follows:

> SECTION 1. Every owner of a patent or proprietary medicine sold or offered for sale within this commonwealth shall, within thirty days after the passage of this act, furnish the state board of health with the formula used in the preparation of the same. The state board of health shall cause all such medicine to be analyzed from time to time, and if the ingredients used in the preparation of the same are found to be injurious to health, shall advertise the name of such medicine and the result of such analysis in such newspapers as said board may deem best, and shall also notify the owners thereof.
>
> SEC. 2. The several formulas furnished the state board of health under the requirements of this act shall not be accessible to the public.
>
> SEC. 3. Any person exposing for sale or selling such medicine after such notice and advertisement shall, upon conviction thereof, be punished by a fine of fifty dollars for the first offense, and by a fine of one hundred dollars for every subsequent offense.
>
> SEC. 4. This act shall take effect upon its passage

The bill was introduced by Senator CRONIN, who admitted at the recent hearing that it was inspired by an article which he claimed to have read in some magazine. But he failed to enlighten the committee as to the name of the periodical or the trend of the article in question. Among the remonstrants to this enactment was President WILLIAM W. BARTLET of the Massachusetts Druggists' Alliance, who is said to have cross-examined Senator CRONIN so effectually as to display his lack of knowledge of things pharmaceutical, and also to arouse his ire most thoroughly. Other remonstrants, beside President BARTLET, were Hon. GORHAM D. GILMAN, CHARLES P. JAYNES, and FRED. L. CARTER of CARTER, CARTER & KILHAM, who delivered a carefully prepared address. Among other statements made by Mr. CARTER were the following:

> The measure before this committee is so far reaching in its possibilities for harm to the druggists of our State that I feel it a duty as a representative of that class to protest against its enactment. It amounts to the utter destruction of all that protection of secrecy which the government has recognized as valuable and proper, taking from citizens the fruit of labor and experiment and making them the prey of rivals. It will pay to consider the far-reaching character of this bill. It includes medicines that are household words. These remedies have a wide use and are highly approved. * * * It will not do to say that these formulas are to be kept secret in the files of the board of health. Are not these files open to the employees of the board? Are these employees different from other men?
>
> Would you consider it safe to entrust your fortune to any board or commission? I do not think you would; then why oblige any other man who has labored for years to obtain a certain result, and who has spent thousands of dollars in making this result known?
>
> Now bear in mind that I am not referring in my remarks entirely to the larger proprietors of patent medicines, but to the large number of retail druggists who have either a cough syrup, pill or other preparation. Are these latter dangerous to the public health?" Mr. Carter then referred to the financial ruin which this legislation would entail, and gave estimates as to the number of people employed in the patent medicine industry and capital invested. Manufacturers would leave the State rather than comply with what would be necessary under this act. "Philanthropists do not ask for this bill, neither do those reflectors of popular thought and temper—the newspapers," he said. * * * *
>
> The board of health do not want the bill. They know as you know, that they have the authority to analyze any proprietary article, and if they find it dangerous to the public health, they have the power to prosecute without notice any party who sells that article. What more power would you give them? I will also call your attention to the fact that this bill says that the board of health, if they find any articles used in any proprietary preparation injurious to health, no matter if the medicine taken in the dose recommended is perfectly harmless, it (the Board), shall proceed to ruin the proprietor and then notify him of the fact.
>
> Remember there is no redress if the assayer has made a mistake, or has a grudge against any proprietor. Boards of health are human, they are liable to err; but still you would make them judge and jury, and by their edict, without appeal, allow them to destroy a man's business, for which he has spent thousands of dollars and years of toil to maintain.
>
> Would you oblige our citizens to send abroad for medicines?" he asked. "They will surely have them, and it is only a question whether our own traders have the profit or strangers. You cannot legislate the conclusions and habits of the people out of existence. You can, however, make our people and industries very uncomfortable, and residence in the State less and less desirable. * * * *
>
> I believe the people of our State prefer to be dealt with as reasonable and intelligent beings; that they do not need laws which assume that they are criminally ignorant and careless, that the exercise of a too paternal solicitude embodied in unnecessary enactments will disgust and nauseate the public, instead of impressing the people with a sense of the erudition and wisdom of the representatives of the general court.

THE New York Academy of Medicine, through its Committee on National Quarantine has submitted to Congress a bill to establish a bureau of public health within the Department of the Interior of the United States. The field of labor for such a bureau is wide and of the utmost importance to the welfare of the nation, and every pharmacist should give his support to this measure.

Written for the American Druggist and Pharmaceutical Record.

PARIS PHARMACIES.

By Sterling Heilig.

There are 750 pharmacies in Paris. Of these 300 do a starving business; 300 make fair profits; another 100 do quite well; and 50 more make solid fortunes. Of all of these the English pharmacies are the best patronized. The French high world will run to Roberts on the fashionable shop street Rue de la Paix for quinine, which he lets them have for 30 cents a gramme. Two small prescriptions which you ought to get for forty cents apiece will cost a French marquis two dollars and a half at Roberts. Here in the rank of swelldom come two Frenchmen, Midy and Logiers, with Swann and Hogg and Rogers, all three Englishmen, for the next place.

In 1883-4 the pharmacy of Rogers was at the height of its success. About that time a young American druggist, touring in and out of Paris on his patrimony, woke up one morning to discover that he had squandered even the money for his passage home. The *noce* was done. He was obliged to go to work. He stepped inside of Rogers' pharmacy and told his case.

"You are an American chemist?" said the Englishmen.

"Yes."

"Where from?"

"Boston."

"You wish to work?"

"Yes."

"Well, step behind the counter"

The first week Rogers gave him thirty five francs; the second week he gave him thirty-six francs; and every week he kept on raising him one franc, on up to 70 francs, or fourteen dollars. This is a high salary for a Paris drug-clerk. It would be hard to find to-day.

At that time Rogers' pharmacy was taking 700 francs a day, and all good business, at heavy profits. The young American stayed on for several years. Much of the trade was English. He got familiar use of the French language, which is difficult, and learned the pharmacopœia, which is easier. All French (?) prescriptions are in Latin, as with us: the metric system was not altogether unfamiliar to him from the start; and he was soon at work upon prescriptions, French and English. He had no examinations to pass at all, because the French law holds the master of a place responsible for all mistakes committed by assistants. On the other hand, he found that it would be impossible for him to ever set up for himself in Paris, which grieved him, for he saw a fortune sure and certain. So, regretfully, he packed off to America. I think this almost ends the story of Americans in Paris who are druggists.

Until the last year every pharmacist (proprietor) in France was required to have his Baccalaureate of Sciences as a preliminary to entering the Ecole de Pharmacie. The Baccalaureate of Sciences takes seven years. The School of Pharmacy of the State (there is no other) takes six years. According as he passed the pharmacy examinations the student was made a first class or a second class pharmacist. A first class pharmacist might alone set up in Paris. This year the law is changed in two particulars. (1) The old distinction of classes is abolished. (2) The Baccalaureate of Sciences is no longer obligatory. In consequence the School of Pharmacy, not in sympathy with the change, has practically raised its standard of final examinations. This year a similar proposition has been agitated for the benefit of budding doctors. It is proposed to substitute, at choice, the "Modern Baccalaureate" for the Latin and Greek. The great lights of the faculty, in general, are bitterly opposed to this. The reason given is that, up to this date at least, the modern language courses have produced no solid results; thus far, they say, only young men trained up in the classics have approved themselves as serious students.

A Parisian Pharmacy—Springtime Confidences.

However this may be, it will be seen that pharmacists in France have their own difficulties. Concerning foreigners who wish to set up here, the law knows no diplomas. Every foreign druggist must pass all the courses of the French State School of Pharmacy. Apart from this, the Minister of Public Instruction exercises an almost autocratic discretion over the reception and continuation of foreign students working for degrees. Undoubtedly Americans are still *personæ gratæ* with the French, although of late years, it is sad to say, our prestige has run down. But we are still much better looked on than the Prussians, the Italians, and the English.

Should an American pharmacist succeed in getting his degree from the Ecole de Pharmacie (and it is not at all impossible) he might expect to make a solid fortune here in Paris. A few rich English houses are engaged in taking all the special profits in a field whereon American dentistry has won imperishable glory. Roberts now takes in no less than $250, on an average, day in day out, throughout the year.

The less legitimate profits of the average Paris pharmacist are of two kinds, first morphine, and second, patent medicines. Concerning patent medicines, the subject of their sale in Europe is so broad and interesting, it would require a letter for itself. But the morphine traffic is as simple in description as it is in practice. According to law, a morphine prescription may be filled but once. Paris pharmacists continue selling on the old prescription as long as customers have money. The drug is sold at 40 cents a gramme; its use among the educated classes can hardly be exaggerated. It is no uncommon thing to find a young man thirty years of age consuming six grammes every week. Doctors themselves have taken to it strongly, for their pleasure. Artists, journalists and actors and the *demi-monde* are given over to it, almost as a class. Prescriptions are so easy to procure; the very jewelers sell syringes made in innocent and fancy shapes, like bracelets. On the other hand, Parisians are moderate in their use of alcohol. Its retail trade is practically free; so even cake shops sell their lady customers small drinks of cognac, liquors and strong Spanish wines. The pharmacists can find no profit there.

To come back to English chemists and their special profits, four reasons are given for their great prosperity in Paris. (1) They are superior to the French in all ideas of business. (2) The fashionable cult among the higher class Parisians for

all things English draws them to these pharmacies just as it draws them to the London tailors. (3) The English and American retail drug trade is in itself extremely precious. (4) The present English houses have a practical monopoly, owing to the fact that they alone have passed the school and taken their degrees. The actual secret I believe to be the first. The Paris pharmacist, like all his race, has no idea of "business" in the English and American sense. On broader lines, the French have always failed to hold their conquests or their colonies. The French lost India, lost Canada, lost Egypt. Wherever they have come in competition with the Anglo Saxon they have suffered. The principle of "business" has no place in their makeup. Let the French druggist make a decent living, and it is all he asks. He will not push his trade. He takes his two hours for lunch: he will not be disturbed by customers while chatting with his friends in his own shop. He treats his customer as enemies, forgets his customers from day to day. All this means nothing. It is only habit. And before the habit changes and the Frenchman learns to hustle, time will have swung around the end of all things and all the druggists of the universe will have been dreaming through long blissfully forgotten ages in in their great and last reward.

PARIS, February 16, 1894.

Written for the American Druggist and Pharmaceutical Record.

TABLET TRITURATES.

By FRANK EDEL.

The latest fad with the medical fraternity seems to be tablet triturates. All of the manufacturing firms with but few exceptions are offering a full line of these preparations, and physicians are being actively canvassed by their representatives, with the result that pharmacists are compelled to make new stock additions and extend their lines, until it will be the old story over again—a stock of unsalable tablet triturates to fill up the shelves and increase the volume of dead stock. There can, of course, be no question regarding the value of the triturates as permanent additions to the products of elegant pharmacy, though their vogue is perhaps the result of a fashionable fad. Being efficient and elegant preparations, they undoubtedly merit the confidence of the physician.

In view of the vim and energy which the makers are displaying in pushing these goods, it would seem necessary for pharmacists to make some endeavor to prevent the accumulation of the triturates as dead stock. The writer has given the subject some attention, and while it is not his purpose to go into any extended description of how tablet triturates are made he proposes to state below in general terms indications and directions for their preparation by pharmacists.

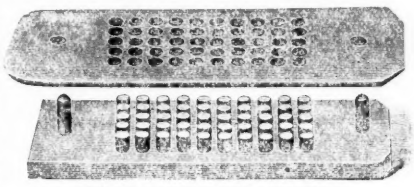
In considering these preparations they must be divided into two classes.

1st. Hypodermic tablets, with a base of pure powdered cane sugar and containing no adhesive agent other than the sugar.

2d Tablet triturates, having powdered milk sugar as a base and containing such adhesives as may be required.

In preparing hypodermic tablets the number of moistening agents at our disposal is limited. The liquid oftenest used is alcohol; but each substance, as a rule, requires its own excipient; absolute alcohol, ether and chloroform being among the substances most frequently employed. With tablet triturates such dilutions of alcohol should be used as suits each individual case best. But it should always be the aim of the operator to keep the alcohol used to moisten as strong as possible, since tablets so made dry with greater rapidity than is the case when such precautions are not taken.

A plate has been designed by a firm of druggists' sundries makers, and is in use



TABLET MOLD FOR 50 TABLETS.
(W. T. & CO.'S NO. 10 MOLD.)

by the writer, for making a hundred hypodermic tablets at one operation. The plate when full holds exactly 25 grains of morphine sulphate and 25 grains of powdered sugar when these are intimately combined. In order then to make tablets of morphine sulphate of ¼-grain strength it is only necessary to triturate thoroughly 27 grains of morphine sulphate with 27 grains of powdered sugar; then moisten with alcohol and rub the mass into the holes of the plate until no more can be forced in. Remove the excess from top of plate and place the latter on the ejecting plate and force out the tablets by a gentle but steady pressure; then allow the whole to stand until dry. Before rubbing the material into the perforations the plate should first be laid on a smooth pill tile or piece of glass An excess of material is directed in the formula to facilitate the work.

This method is described merely as an illustration of the ease with which these articles can be made. In making the different tablets it is only necessary to have the materials in a state of impalpable powder and thoroughly triturated. The ingredients must be carefully proportioned so that each perforation shall contain the exact amount of medicines desired. Some experimenting is necessary before accuracy can be reached, but experiments of this kind are simple and inexpensive.

It will be argued by some that the outlay for plates is considerable and does not justify the druggist. To this would say that three sizes of plates are all that are necessary to prepare any combination. The hypodermic plate which the writer uses cost $3.50 and makes 100 tablets at a time. Plates for making 1-grain triturates can be obtained in hard rubber for $1.75. These have a capacity for 50. A plate for larger sizes would cost relatively more, but the cost is really too slight for consideration. In taking up this class of work the pharmacist should remember that alcohol is the best excipient for water soluble drugs; for substances soluble in alcohol water will prove the best excipient.

Written for the American Druggist and Pharmaceutical Record.

FELLOWSHIPS IN PHARMACY.

By PROF. EDWARD KREMERS, PH.D,
School of Pharmacy, University of Wisconsin.

I am pleased to see by the editorial article on the subject of pharmaceutical fellowships in the last issue of THE AMERICAN DRUGGIST AND PHARMACEUTICAL RECORD that my suggestions not only meet with your approval but also enlist your support. I hope this matter of fellowships, at least, will be ripe by the time of the next meeting of the A. P. A.

With regard to your last paragraph I take the liberty to call your attention to the fact that the University of Wisconsin has already taken the step you advocate. Since the last two years we offer a four years' course besides the two years' course which the university has offered for some time. This longer course is on an equal footing as to requirements for admission and general character of studies with the other four years' courses of the university.

Only a year ago this course was announced in the catalogue, but we already have four students. This is a small number, yet if the status of pharmaceutical education of this country is taken into consideration, this small beginning certainly is very encouraging. This course leads to the degree of Bachelor of Science (in Pharmacy) corresponding *e.g.* to the degree of B. S. (in engineering) or B. S. (general science course) at this university. This is done to avoid a further multiplication of degrees. The master's degree of science (exclusive of engineering) can be obtained after a year of residence as graduate at the university. Three years of graduate study are required for the degree of Ph.D.

With regard to fellowship, I would state that the general university fellowships are open to pharmacy students as well as to others, *i.e.*, on the same terms. The applicant must have a bachelor's degree, must be an excellent student, and possess qualities for original research. The present fellow in pharmaceutical chemistry is a graduate from a classical course and from the two years' course in pharmacy. Among the credentials that he presented as a candidate for the position of fellow was a thesis on "Abeitic Acid," published in the "Proceedings of the A. O. A." of last summer. A perusal of this article will enable one to form an opinion of what is demanded of candidates for such positions at the University of Wisconsin.

It would be desirable to have fellowships for excellent students of the two years' course who have no academic degree, and it will be our endeavor to procure such as early as possible. These statements show that I have not been advocating an idea impossible of fulfilment in the present stage of development of pharmaceutical education. The suggestion is not visionary or hypothetical but something that has stood the test of practical experience.

Written for the American Druggist and Pharmaceutical Record.

Two Elixir Formulas.

By ELBERT E. FISHER,
Bridgeport, Conn.

DETANNATED ELIXIR CALISAYA.

Calisaya in No. 60 powder	640 grains
Lime, calcined, in powder	1 ounce
Glycerin	4 drachms
Hydr chloric acid	10 minims
Syrup	7 fluid ounces
Oil of orange	45 minims
Oil of lemon	10 minims
Oil of coriander	5 minims
Water	q. s.
Alcohol	q. s.
Fuller's earth	4 drams

Mix the bark and lime intimately; add 3½ ounces of water, stir well and let dry slowly. Percolate with a mixture of the acid and alcohol, adding sufficient alcohol to bring the bulk up to 4 fluid ounces. To this add the oils and, after shaking thoroughly, the glycerin, syrup and sufficient water to make one pint; finally add the Fuller's earth, shake well and filter.

Each teaspoonful contains the virtues of 5 grains of the bark. The elixir is mixible with iron preparations.

ELIXIR OF CALISAYA AND COCA.

Calisaya bark, No. 60 powder	640 grains
Oil of orange	1 dram
Oil of lemon	10 minims
Oil of coriander	5 minims
Alcohol	4 fluid ounces
Hydrochloric acid	10 minims
Water	3 fluid ounces
Glycerin	3 fluid ounces
Fluid extract of coca	2 fluid ounces
Syrup, enough to make	1 pint

Percolate a mixture of the oils and alcohol, hydrochloric acid, glycerin and water, adding alcohol and water mixed in the above proportions to make the percolate measure 10 fluid ounces. To this percolate add the coca and sufficient syrup to make 16 fluid ounces. Add to this a little Fuller's earth, shake well and filter, adding through the filter sufficient simple elixir to preserve the volume. This elixir is calculated to contain the virtues of 5 grains of calisaya bark and 7½ grains of coca leaves

Written for the American Druggist and Pharmaceutical Record.

A PROFITABLE LINE FOR PHARMACISTS.

By A. Hawkeye-Kodak.

In "Locksley Hall Up to Date" (if it should ever be written) will be found the following lines:

In the Spring the rays actinic exercise a greater strength;
In the Spring the time exposure dwindles to a lesser length;
In the Spring a lens is purchased which you know you cannot use,
And you find yourself bankrupted buying stuff to take new views.

These lines will strike a responsive chord in the heart and purse of the vast army of photographers all over the world, and among these are a great many pharmacists.

Instead of being a source of expense the passion for picture making may, in the case of the pharmacist, be readily turned into a source of income, not directly but indirectly.

W. H. Hostelly of Philadelphia in an interesting contribution to our "Tips on Advertising" last year* suggested that the pharmacist use the views taken by him as premiums to be given those purchasing more than a certain amount from him each year. As these views would be full of local reminiscences they would be much appreciated by the customers in the smaller towns.

Carrying the idea of utilizing the fad a step further we find pharmacists in a few instances awakening to the fact that they can with propriety and profit carry a stock of photographic appliances and materials. The knowledge of chemistry and of chemical manipulation already possessed by the pharmacist will make it a simple and easy thing for him to learn sufficient of the processes of the photographer to carry them out himself and to explain them to his patrons.

First of all the pharmacist himself or some of his staff should take up photography, if they have not already done so. This can be done with but little outlay of time and money and with great gain of knowledge and pleasure. An expensive outfit is not necessary. For the sake of the example as well as for the pleasure and convenience of the pharmacist in its use I would recommend that for his own use he purchase a hand camera carrying 5"x 7 plates and fitted for the attachment of a roll holder if desired and of good quality.

*See American Druggist and Pharmaceutical Record for April 21, 1893, page 209.

Such a camera, with an ordinary lens finished in plain wood, may be had at from $15 to $25. A more compact form is the folding hand camera, costing from $25 to $60, the price depending largely upon the character of the lens. The price of all the necessary outfit may be summarized as follows:

Hand camera and lens ...$15 to $60
Tripod ... ... $2 to $ 5
Developing and printing outfit ... $4 to $10

Or a total of from $25 to $75 or upward, as may be determined on by the purchaser.

If this is purchased with the stock of photographic goods that are to be laid in a discount of about 15 to 20 per cent. can be secured from the list prices.

Before ordering, whether for your own individual use or for a stock, catalogues and discount sheets should be obtained from all the leading dealers together with some rudimentary book of instructions on the subject.

Fortunately the pharmacist already carries in stock many of the chemicals required, and it will be taken for granted in the lists given below that he carries such a stock of chemicals as is found in the average drug store. If he happens to have a supply of any of the chemicals named they may be omitted in making up his stock order.

It might be possible to embark in the business with a stock costing less than $100 outside of chemicals, but an effort to limit the investment to less than that amount will make it necessary for the pharmacist to depend to a considerable extent upon his special order business, and if a purchaser has to wait until his purchases are ordered from the city he is apt to order himself direct from the wholesaler

While one or two small, cheap cameras should be embraced in the outfit, it should be borne in mind that the boy who has but 5 or 10 dollars to spend on a camera will not very likely be able to spends as much for plates and materials afterward as will the youth or man who spend from $15 to $50 to begin on. Consequently it is better policy, as a rule, to cultivate the sale of the better class of cameras. Besides, the results obtained with the very cheap camera will probably be so poor as to discourage the amateur, and thus lose him to photography.

The use of roll holders and films should be rather discouraged for two very different reasons. The first and most important is that they are less certain in their results than are plates, particularly in the hands of beginners, and even when used by experts they occasionally turn out badly on account of some sort of electrical phenomenon taking place on the surface of the film. The second reason is that being more troublesome to develop than plates and being so convenient to send away there is a greater disposition on the part of the amateur to send his roll to the maker of his camera to have the pictures developed, printed and mounted, and the roll filled and sent back to him. The pharmacist would then get nothing out of it at all after once selling the camera.

The catalogues of dealers always contain a series of cheap "outfits" for developing and for printing and toning. It might be as well for the novice to include a few of these "outfits" in his first order so that he may be able to see just how they are put up. Afterwards he can get up "outfits" of his own, purchasing separately the necessary apparatus, etc., to make them up.

It will be advisable, and in the smaller towns almost necessary, for the pharmacist to fit up for the use of himself and his patrons a photographic dark room where plates may be developed. This need not entail any serious trouble or expense, the most serious problem generally being the water supply, drainage and light.

If there is no closet supplied with running water which can be appropriated for this purpose, a small tank, something like a large cooler with a faucet, may be put in with a tub in which to catch the waste water.

A very good way in which to avoid the heat entailed by having a light burning in so small a room is to have a gas jet or a lamp placed outside the dark room immediately in front of a window opening into the room. This window may be anywhere from 12 x 14 to 18 x 36 and should be provided with light double sash sliding sideways. Fill one of these sashes with a pane of orange or amber glass and the other with a pane of ruby glass. In this way when both are closed at once there is practically no danger of the light having any actinic power whatever if the correct shades of glass have been selected. This glass might with advantage be included in the first stock order, as not all red and amber glass is non-actinic. Ruby and amber tissue may be stretched in the sash instead of the glass, though the results are not so satisfactory as with the use of glass.

If it is preferred a dark room lantern may be purchased, preferably one fitted for a gas jet if you can get one put into the closet without too great trouble. Such a lantern would cost from $1 to $3.

Lastly, do not be too sanguine. While there is money to be made in some sections and under some circumstances it should be borne in mind that in this as in other fields competition is increasing, new things are coming out, old ones shoved to the wall and dead stock thus accumulated.

Rapid Estimation of Urea.

Dr. E. Riegler proposes to use Millon's reagent in a rapid and easy method for the determination of urea in the following manner: Take a test tube about 140 mm. long by 20 mm. interior diameter. Close with an airtight cork perforated by two holes. In one of these holes place the tube of a funnel provided with a stopcock. In the other perforation place a glass tube through which the test tube may be connected either with a Knop-Wagner nitrometer or with some other apparatus for the collection of gases. The tube of the funnel must reach 15 mm. below the stopper, while the other tube should not extend below the cock at all. Now with a pipette put exactly one Cc. of the solution of urea in the test tube. Then stop up the test tube by turning off the stopcock in the fitter and put the tube into a beaker of the same height as the test tube and containing about a liter of water at the ordinary room temperature. After 5 or 10 minutes adjust the water level in the burette at zero and turn off the glass stopcock carefully and then introduce exactly 2 Cc. and 4 or 5 drops of Millon's reagent into the funnel. The tube of the funnel may be marked at the right point so that it will be unnecessary to measure the reagent each time the operation is repeated.

Read the "trade notes" and the market review every week if you want to keep posted.

Written for the American Druggist and Pharmaceutical Record.

EXTENT TO WHICH PHARMACISTS SHOULD DEVOTE HEIR ATTENTION TO OUTSIDE INTERESTS.

By R. J. Hardy,
Mansfield Valley, Pa

Every man of every profession and trade owes a duty to the public as well as toward his family, his business and himself, and although the pharmacist has not as much spare time as most business men, it is his duty as a citizen to do all in his power to further the interests of the community in which he lives. As to whether this will benefit him as a *pharmacist* remains to be seen. For instance, he may be chosen to serve as a member of the school board, or of the Town Council or of the Board of Trade. We will take it that he is honest, capable and progressive, and in every respect well suited for the position. He will advocate improvements of various kinds and earnestly devote time and talents to the furtherance of the best interests of the people and probably in a few years will have the satisfaction of seeing a very material improvement in the condition of affairs brought about largely by his efforts. He will have increased his influence in the community, become more widely known, have gained the respect of at least a considerable portion of the people, broadened his own ideas, and have obtained an amount of valuable general knowledge of men and things that otherwise he would not have had. Incidentally he will also of course have his individual share in the benefits that he has helped the community to enjoy. All this is very gratifying for success, public esteem and influence are dear to us all

But as far as the benefit to him *as a pharmacist* is concerned it all amounts to simply nothing. It is true that our public spirited pharmacist will have made many friends perhaps, and brought himself more conspicuously before the public. But he will also have made enemies, for no man can occupy a public position and discharge his duties faithfully without making enemies, and one enemy will do more harm to his business than several friends will do good, for the enemy will go out of his way rather than come into his store, while the friends will not make any special effort to throw their trade his way if they can be as well served in a more convenient place. As far as being brought before the public is concerned, $20. judiciously expended in printers' ink will do more good than a year of faithful and useful public services. The public may appreciate his efforts and even feel grateful, but the gratitude will not take the substantial form of increased trade nor will the fact that he is freely and voluntarily attending to public business be taken as an excuse for his occasional absence from his store. The pharmacist is in a different position from most business men. Every minute of his time may be profitably occupied about his business. When he is not actually engaged in the necessary work of store or laboratory he can be occupied in interesting chemical and pharmaceutical research and time thus spent will be much more profitable to him in his calling than if devoted to gratuitous public service.

In conclusion the writer would recommend every pharmacist who has not been there and who has the opportunity of serving the public by accepting an honorary office, to do so, if he can afford it, if only for a term of a year or two, for the general knowledge he will gain thereby. But let him recollect that such services if faithfully discharged will involve more or less self sacrifice and that his business, if not actually injured, will certainly not be benefited. In fact, it may be safely said that the damage to his own interests will be almost in direct proportion to the benefit to the public, for the more time he devotes to public interests the less he has for his own affairs, and the pharmacist who desires the greatest success as such will spend no time on public business and will let politics severely alone except so far as expressing his opinion when called for and voting on election day.

I am aware that this course appears narrow, but it is business and we are looking at it from a business standpoint, and if any pharmacist doubts the truth of these observations let him devote a few years to public service as the writer has suggested, and this will be one of the things he will learn.

SPRING MEDICINES.

The advent of spring is heralded by various things, for various people. To the young lover it means flowers and moonlight strolls 'mid mossy banks. To the gourmand it means lamb and green peas, and to the pharmacist it means "sarsaparilla" and soda water.

That the spring house cleaning should be accompanied by a spring blood cleaning is an idea firmly fixed in the minds of the public, whatever scientists may say, and shrewd dealers in medicine have fostered and made much of the idea. Therefore whether he will or no the pharmacist must sell "blood purifiers." We therefore append some formulas suitable for this class of trade. The following is taken from an article published in a previous issue of The American Druggist by Ferd. Lascar, Ph.G., and is eminently practical.

That sarsaparilla is inert has often been asserted, still it is well to bow to the generally accepted belief, which never yet has been conclusively disproved, viz., that it is efficacious in blood diseases. Sarsaparilla certainly has strong advocates as a remedy in blood changes traceable to a syphilitic source, and so has sassafras, which also promotes the digestion and acts gently upon the kidneys and upon the skin.

As already stated many botanical drugs have been suggested, but in practice most are found useless. The following formulas will be found to answer the purpose well; they have stood the test of use, and make neat and palatable preparations which require little labor to prepare. The dose in each instance is calculated to be a tablespoonful two or three times a day, but some of the preparations can, as will readily be seen, be put up in more concentrated forms I also wish to suggest that when it is intended to make up large quantities of them, the formula can conveniently be improved upon by making a fluid extract of the different mechanical drugs mentioned entering into the prescription direct after mixing and grinding.

I.—Potass. biartr	℥ ss
Potass. bicarb	℥ iiss
Extr. podophyll, fld	f ℥ i
Ext sarsapar. comp. fld	f ℥ iss
Tinct. card. comp	f ℥ ii
Glycerin	f ℥ ii
Aquæ q. s. ft.	Oi

Dissolve the potassium salts in 8 fluid ounces of water by the aid of a gentle heat add the remaining ingredients and set aside over night and filter.

[Note.—Large quantities can be made beautifully clear by running the liquid through a filtering hat of felt.]

II.—Sodium sulpho-vinate	℥ i
Syrup sarsap. comp	f ℥ iv
Fluid ext. taraxac	f ℥ ii
Syr. aurant. cort	f ℥ jss
Aq. q. s.	Oj

Mix and filter.

III.—Sod. et potass. tart	℥ iss
Ext. sarsapar. fld. comp.,	
Ext. taraxac. fld. ana	f ℥ iss
Glycerin,	
Syrup, ana	f ℥ ii
Spirit gaultheriæ	f ℥ i
Aq q. s.	Oj

Mix and filter.

IV.—Acid tartar	℥ ii
Soda carbon	℥ iii
Syrup sarsap. co	℥ x
Ext. podophyll fld	f ℥ iii
Aquæ	℥ xxiv
Glycerin q. s. fl.	℥ xxxvi

Dissolve the solids in the water and when ebullition has ceased add the other ingredients.

V.—(For those who insist upon using iodide of po assium.)

Potas iodid	f ℥ ii
Syrup sarsap. co	f ℥ viii
Extr. xantoxyl, fluid	f ℥ ss
" sennæ, fluid	f ℥ i
" prun. virg., fluid	f ℥ ss
Aq. q. s.	Oj

Mix and filter.

Note.—I have found that the addition of half an ounce of glycerin improves the appearance of the preparation.

VI.—(For those who insist upon the value of trifolium):

Sod. et potass. tartar	℥ ii
Trifolium, fluid ext	f ℥ iss
Sarsapar., fluid ext	f ℥ ii
Taraxac., fluid ext	f ℥ i
Syr. sarsapa. co.,	
" prun. vrirg. ana	f ℥ ii
Aquæ. q. s	f ℥ xxiv

Mix and filter.

The above named prescriptions I submit to the readers of The American Druggist. As already stated, they have each stood trial as to their value, and that they offer no difficulty to prepare I believe will be readily admitted.

The following by E. E. Fisher, Ph.G., which was published in The Pharmaceutical Record some time since, is also very appropriate to the season.

SARSAPARILLA AND IODIDE OF POTASSIUM.

Sarsaparilla grd	1 pound
Burdock root, Dandelion root, Prickly ash bark, Chamomile, Roman ää	3 ounces
Sassafras bark	4 ounces
Iodide potassium	1 ounce av.
Salicylate soda	½ ounce av.
Glycerin	12 fl. ounce
Alcohol	1½ pints
Water, enough to make	1 gallon

Grind all the herbs to No. 20 powder. Mix the glycerin and alcohol with 2 quarts of water. Macerate 24 hours and percolate. When the liquid has ceased to drop, pour in hot water until a gallon altogether has been percolated. Add the iodide of potash and salicylate soda and dissolve. If not sufficiently dark to suit the eye add caramel 1 fl. ounce.

Bottle this in 12-ounce green panels and label attractively. This will cost, without the carton, about 17 cents a bottle. The carton will cost 2 or 3 cents extra.

Put 2 or 3 dozen on the counter next to the scales, and over them hang a sign reading "Jones' Sarsaparilla, only 50 cents a bottle. Guaranteed to be equal to any made."

Other compounds may be made, almost without limit. A few ideas are subjoined:

SPRING BITTERS.

Aloes	6 ounces
Sassafras	8 ounces
Hops	2 ounces
Gentian	4 ounces
Chamomile	2 ounces
Acetic acid, U. S. P.	1 ounce
Alcohol	1 quart
Water, q. s.	1 gallon

Mix acid and alcohol with 2 quarts of water. Macerate 24 hours, then percolate, adding hot water to make 1 gallon.

Pharmaceutical Progress.

Preparation of Salicylic Acid.—S. Marasse has patented the following process in Germany (D. R. P., 73,279): Allow carbon dioxide to act on an intimate mixture of phenol and potassa in a closed vessel at an elevated temperature, the potassa being in excess. The salicylic acid formed is separated by precipitation with a mineral acid and subsequently purified.

New Cheese Ptomaine.—Charles Le Pierre has demonstrated to the French Academy of Siences the presence of a new ptomaine which appears in damaged cheese as a well crystallized base of the formula $C_{16}H_{21}N_2O_4$. It is bitter, inodorous, slightly acid to phthalein, soluble in alcohol but hardly soluble in water, and gives the usual alkaloidal reactions but does not yield a tannin precipitate. It causes diarrhœa.

Liquor ammonii ergotinici, a solution of which one cc. represents three grammes of ergot or three decigrammes of ammonium ergotinate, is claimed to be a solution of the salts of a decomposition product of ergot, which while retaining the full activity of the drug is more permanent and reliable than the preparation made directly from the drug; the dose is 15 to 20 drops; for subcutaneous injection the charge of a Pavraz syringe.—Dr. A. VOSWINKEL, *Pharm. Ztg.*, 1894, 100, through *Am. Jour. Pharm.*

Spermin.—Poehl (*Vratch*, No. 3, 1894) draws attention to the beneficial effects of spermin in neurasthenia, anæmia, and certain cachexias. The explanation of its action in such conditions may, perhaps, be found in the fact that the substance is a natural ferment of tissue "oxidation processes" which destroy leucomaines arising on decomposition of proteids and causing various forms of auto-intoxication. Weber points out (*ibid.*) that recently he administered spermin in a case of poisoning by oysters with satisfactory results.

Ammoniacal Mercury Cyanide in Quantitative Analysis.—F. W. Schmidt (*Ber. d. d. chem. Ges.* 1894, 27, 225) finding that the methods so far used for converting into oxides metals which have been precipitated as sulphides for the purpose of weighing them are unsatisfactory, proposes the use of an ammoniacal solution of mercury cyanide as leaving no residue whatever on evaporation and incineration. On drying the metallic sulphide with the ammoniacal solution the sulphide is readily converted into a cyanide and mercury sulphide is formed. On incineration the latter is at once driven off and the metallic cyanide converted into an oxide. The process has proved satisfactory with zinc, bismuth, iron and copper.

Alphol is the salicylic ether of alpha-naphthol and is isomeric with betol which is the salicylic ether of beta-naphthol. Alphol is obtained by heating a mixture of sodium salicylate, sodium alpha-naphtholate and phosphoroxychloride to 120 -130°. The mass is then freed from the sodium chloride and sodium phosphate which result by washing with water, and is further purified by crystallizing out of alcohol. Alphol is similar to salol in its behavior. It is decomposed in the intestinal tract into salicylic acid and alpha-naphthol and is reported to have yielded good results in the treatment of gonorrhœal cystitis and of articular rheumatism. Its indications are the same as for the other salicylic acid and naphthol combinations. The dose is given at about 0.50 to 1 gramme or even as high as 2 grammes.—*Phar. Rundschau.*

Teucrin in Cold Abscesses.—Kahane (*Wien. med. Presse*, No. 1, 1894) describes the use of teucrin in a case of chronic abscess of the back of more than nine weeks' standing. The abscess cavity extended from the lower cervical vertebræ right down to the sacrum, and gave a marked fluctuation. Teucrin was given in three injections of a gramme each. After each injection there was a rise of temperature and some constitutional disturbance. Three days after the last injection the abscess wall was incised and about 2 liters of pus were evacuated. The abscess then steadily healed, and after about a month the cavity had become almost entirely obliterated, the only trace of it being a sinus about an inch deep, secreting a serous fluid. The tuberculous character of the abscess had disappeared.

Detection of Lactic and Butyric Acids in the Stomach Contents.—Professor Saundby of Mason College, Birmingham, England, says: "The test for lactic acid is made by adding to a 1 per cent. solution of carbolic acid a few drops of perchloride of iron, and diluting this, if necessary, with distilled water, until the solution turns a pale amethyst color. On adding a little of the filtered stomach contents the amethyst blue turns to a canary yellow if lactic acid be present. This reaction is given by lactates as well as by lactic acid, and by other substances, such as alcohol; but under the conditions of the experiment these fallacies are of no importance. If the solution turns pale yellow with a reddish or brown luster butyric acid is present; but this, too, is not important, though the fact is of value in the examination of vomited matter, for butyric acid is a product of fermentation in the stomach, and is a very powerful irritant of the gastric mucous membrane.

Ephedrine is an alkaloid isolated by Nagai (*Berlin Klin. Woch.*, 1887, No. 38) but concerning which nothing has yet been published. Merck isolated the same base, with a melting point for the hydrochlorate of 210° C. in the year 1888 from the *Ephedra vulgaris, var. Helvetica*, but on account of lack of material could not prosecute his studies of the alkaloid. The alkaloid is extracted from the alcoholic extract by treating with alkali and ether and is then converted into the hydrochlorate and purified by recrystallization. The alkaloid itself forms a white crystalline mass, boiling at about 255° without decomposition. It is soluble in alcohol and ether and in water, forming with the last a hydrate. The hydrochlorate crystallizes from alcohol in white crystalline needles with a melting point of 214-215° C. and is readily soluble in water.

Determination of Aconitine.—Aconite root examined by Keller was found to contain from 0.87 to 1.23 per cent. of alkaloid, as a frothy and partly crystalline mass, when shaken out with ether. For separating aconitine from the amorphous base the mass was washed with small quantities of cold ether, which leaves the aconitine as a white crystalline powder. By evaporating the ether solution of the amorphous base a small portion was obtained in a crystalline state. From 0.282 crude alkaloid 0.239 crystalline aconitine was obtained. By dissolving in 10 Cc. alcohol, adding water until the liquid becomes turbid, and then more alcohol until clear, spontaneous evaporation gives aconitine in colorless prismatic needles, but in smaller quantity. The crude alkaloid evaporated with phosphoric acid gives a rose coloration, pure aconitine does not, and the amorphous base gives a brown color. With concentrated sulphuric acid the crude base gives a pale yellow color, the pure aconitine remains colorless, and the amorphous base gives a red coloration (*Schweitz. Wochensch f. Chem. u. Pharm.* 1894, No 7).

Quinine in Pills.—Kurssteiner prepares quinine in pilular form by mixing intimately ten grammes of quinine sulphate and two each of citric acid, powdered gum, and sugar of milk, then massing with syrup. The pills, when cut, are rolled first in starch and afterward in talc (*Moniteur*, xliv, 1423).

Toxicity of Thyroid Extract.—Chantemesse and René Marie describe a case of myxœdema in which injections of thyroid extract, though producing a decided ameliorating effect, in extra strong doses caused vertigo and considerable discomfort, the symptoms being decidedly toxic. A sheep was therefore experimented upon with the extract during several months, and a marked elevation of temperature was noted to follow the injection of any unusually strong dose. The discomfort produced caused the animal to become very irritable, and on several occasions it broke down the walls of the place in which it was confined. When, however, the injections ceased, the animal soon recovered its normal health and condition (*Soc. med. des hôpitaux* through *Nouv rem.*, x, 104).

Solvent Action of Tartrates.—H. N. Warren finds that the solvent action of Rochelle salt on metallic hydrates and carbonates, exemplified in ferric and cupric compounds, extends to ferrous compounds and to the hydrates and precipitates of zinc, manganese, nickel, cobalt, chromium, and aluminium. The precipitates of barium, strontium, magnesium and calcium compounds are also to a considerable extent soluble when boiled with a concentrated solution of the tartrate, and both antimony and bismuth oxychlorides, as well as stannic compounds, are entirely dissolved on heating with a sufficient quantity. Cadmium carbonate is practically insoluble in a neutral tartrate solution, and cadmium compounds in solution may thus, by suitable means, be distinguished from cupric salts (*Chem. News*, lxix, 125).

Cinchonifine.—This is the name given by Jungfleisch and Léger to one of several isomers of cinchonine first mentioned by them some years ago (*Pharm. Journ.* [3], xviii., 622). They now state that on several occasions since this base has been confused with cinchonine by different workers, and to prevent further confusion they have been induced to examine the compound again, and now publish their results in detail. Cinchonifine $C_{19}H_{22}N_2O$ is now described as crystallizing from boiling alcohol in small anhydrous needles, brilliant and colorless. It is insoluble in water, ether, or weak alcohol; only slightly soluble in cold alcohol or chloroform; but soluble in a mixture of the last two solvents. The crystals melt at 273°.6 (corr.), more than eighteen degrees above the melting point of cinchonine, and volatilize unchanged when strongly heated. They are dextrogyre, and the rotatory power augments as the concentration of the alcoholic solution increases. Details are given of a large number of salts of cinchonifine, and the authors conclude by pointing out that Hesse, who in 1890 doubted the existence of the base, last year described under the name "homocinchonine" a compound which presents very great analogies with it (*Comp. rend.*, cxviii, 536).

A new Roumanian Pharmacopœia has just appeared. It is edited by Professor Maldarescu and MM. Trausch and Rossin.

The solubility of exalgin can be materially increased, says P. Cesaris, by addition of 1.1 gr. sodium salicylate to 1 gr. of exalgin. This may be dissolved by warming gently with 10 Cc. of distilled water, the result being a clear solution.

Antiseptic Mouth-Pearls, consisting of thymol, mentnol, eucalyptol, vanillin and ethereal oils combined with sugar have been patented in Germany by Radlauer of Berlin. They are said to have a local action only and are recommended for children troubled with catarrhal affections.

Impurities in Filter Paper.—Ad. Andreé noting that a number of samples of calomel tested by him showed an excess of chloride, took occasion to examine the filter paper used in his examination and found that it contained both chlorides and starch. The latter would give confusing results in estimating alkaloidal solutions by means of precipitation with iodine solution.

Ultramarine.—A patented process of converting green ultramarine into the blue variety proposes to effect this conversion by heating green ultramarine under pressure with a saturated solution of sulphur with sodium sulphide. The same end may be attained by first mixing the green ultramarine with sulphur, and then digesting in a solution of sulphide of sodium.

Thermometer for High Temperatures—Baly and Chorley describe a thermometer which can be employed for all temperatures between—8° C. and 650° C. The instrument is made on the same principle as the ordinary mercurial thermometer, very hard glass being employed, and an alloy of mercury with potassium and sodium serving for the expanding liquid. This alloy has the advantage of being liquid through a very much greater range of temperature than mercury, its freezing point being — 8° C. and its boiling point 700° C., whereas mercury freezes at — 40° C. and boils at 357° C. (*Berichte*, xxvii, 470).

Convolvulin.—W. Kromer continuing his researches on the convolvulaceous resins, has investigated convolvulin obtained from jalap. He finds that this body splits up on treatment with baryta, even without heat, into convolvulinic and methy-ethyl-acetic acids; the latter, being volatile, appears to have been overlooked by former investigators. Convolvulinic acid is monobasic, and its solution possesses the property of dissolving convolvulin; by hydrolysis it yields convolvulinolic acid and a glucose, the nature of which could not be satisfactorily determined. Convolvulinolic acid is also monobasic and isomeric, but not identical, with jalapinolic and scammonolic acids. Mayer's convolvulinol the author considers to be impure convolvulinolic acid (*Pharm. Zeits. Russ.*, xxxiii, 1).

Insects Attacking Nutmegs.—J. H. Hart has collected specimens of several species of insects which attack nutmegs while being prepared for the market, and among them W. H. Blandford has identified the following: 1. *Trogosita mauritanica*, Linn.; 2. *Tribolium ferrugineum*, Fabr.; 3. *Carpophilus species;* 4. *Læmophlœus sp.;* 5. *Hypothenemus sp.;* 6. *Lasioderma sp.* The second was most common, and the last is possibly *L. testaceum*, which affects Indian cigars injuriously. The insects appear to have been imported into Trinidad in the corn and linseed meal employed as horse and cattle food. As a preventive the nutmegs are now sprinkled in the drying room, and also when packed for market, with quicklime in powder. A certain means of destroying the insects is to expose the nutmegs in air tight receptacles to the vapor of carbon disulphide (*Trinidad Bot. Dept. Circular Note*).

Crystallization of Cellulose.—E Gilson finds that when sections of cellular tissue are kept in contact for a time with Schweitzer's reagent (cuprammonia), then washed successively with ammonia and water, so that the copper compound is dissolved gradually and the cellulose slowly precipitated, the latter forms nodular or arborescent crystals in the interior of the cells. The crystals are insoluble in dilute acids and alkalies, but dissolve in concentrated sulphuric acid, and behave generally as cellulose. Starch must be completely removed before applying the reagent, and certain other precautions are also found to be necessary. Two distinct substances appear to be present in most cellulose membranes, one only of which is crystalline. The other is amorphous, and gives no coloration with iodine (*Chem. Centr.*, through *Journ. Chem. Soc.*, lxvi., 107).

Cathartic Acid.—Jensz prepares this acid by evaporating an infusion of senna in vacuo, mixing the residual extract with an equal volume of alcohol, shaking well and leaving the mixture to settle for twelve hours. After decanting off the liquid, the deposit is again shaken with alcohol, and finally pressed. The filtered liquids are then precipitated with lead acetate, the precipitate separated and well washed by kneading with water until the washings pass away clear. The partially dried precipitate is mixed with alcohol and decomposed with sulphureted hydrogen, excess of the gas driven off by passing a stream of carbonic acid or air through the liquid, then heating the whole in a vessel fitted with a reflux condenser, filtering to separate lead sulphide, and washing with alcohol. The clear liquid is then mixed with ether as long as a pale yellow deposit is produced, which is allowed to settle. After pouring off the ethereal liquid, the brown deposit on the sides of the vessel is washed with ether or strong alcohol, dissolved in a very small quantity of 30 per cent. alcohol, and evaporated at a temperature not exceeding 50° C. The preparation so obtained amounts to from 0.6 to 0.75 per cent., and it is sufficiently pure for medicinal use. Cathartic acid is described as having the characters of a glucoside, and a composition represented by the formula $C_{30}H_{36}NO_{15}$. It is soluble in hot water and alcohol. The dose is given as 0.10 to 0.15 gramme (*Pharm. Zeitsch. für Russland*, xxxii, 744).

Decomposition of Ethylene.—V. B. Lewes reports to the Royal Society that the textbook equations representing what occurs when ethylene is decomposed by heat are probably incorrect. He finds that when the gas is passed through a heated tube no change is observable until a temperature of 800° C. is reached. Traces of acetylene are then observed, and this compound increases in quantity between 800° and 900°, large quantities of methane being also produced, together with liquid products—

$$3C_2H_4 = 2\,C_2H_2 + 2\,CH_4.$$

Hydrogen begins to appear and carbon is deposited near 1200°, the formation of oil decreasing until near 1500°, when the decomposition of the ethylene is practically complete, the products of decomposition being chiefly hydrogen, with some undecomposed methane and deposited carbon— $C_2H_4 = C_2 + 2H_2$.

Between the primary and final decompositions represented by the above equations a large number of interactions occur, being due to the polymerisation of the acetylene formed from the ethylene, and also from the methane as follows:

$$2C_2H_4 = C_2H_2 + 3\,H_2.$$

Further heating of the decomposition products of ethylene results in the formation of ethane. This is decomposed, at 900°, into ethylene and hydrogen, thus:

$$C_2H_6 = C_2H_4 + H_2.$$

Active Principles of the Papayaceæ.—L. Guignard, who has shown that plants in certain families allied to the Cruciferæ, also resemble members of the latter order in containing similar active principles and yielding analogous volatile oils, now shows that the Papayaceæ, which have no botanical affinities with plants in the previously examined orders, yet resemble them as regards their active constituents and properties. Thus, *Carica papaya*, L., contains the ferment myrosin, and the glucoside, potassium myronate, which combine in the presence of water to form the volatile oil, as in the earlier instances. The root is richer in the two principles than the other vegetative organs, the stem being very poor in glucoside The leaves, however, contain proportionately more of the ferment than the root. From two other species, *C. condinamarcensis*, Hook fils, and *Vasconcellea quercifolia*, Saint Hil., the quantity of essential oil obtained was relatively much less than from *C. papaya*. The organs of the plants poorest in myrosin were found to be richest in latex, containing the vegetable trypsin—papain, but no constituent of the latex takes part in the formation of volatile oil. The myrosin is found in certain parenchymatous cells, and as regards the localization of this ferment the seeds of *C. papaya* present a curious analogy with certain cruciferous seeds. The glucoside, on the other hand, as in the Capparidaceæ, exists alone in the seed albumin, though associated with a small proportion of ferment in the embryo (*Comp. rund.*, cxviii, 545).

Determination of the Iodine Number.—Dr. R. Seeliger suggests the following method for the purpose of dispensing with the use of mercuric chloride. Chlorine is passed into a solution of 10 grammes iodine in 200 Cc. alcohol for about ten minutes, when the iodine is converted almost suddenly into trichloride. Excess of chlorine is then driven off on the water-bath and the cooled solution made up to 250 Cc. On adding to this solution potassium iodide (1 to 5) a quantity of iodine equivalent to the chlorine is liberated, and it can be determined with a decinormal solution of thiosulphate. In carrying out an experiment with oleic acid, for example, 0.3 gramme dissolved in alcohol mixed with some chloroform is added to 10 Cc. of the iodine trichloride solution diluted with 50 Cc. of alcohol, and the whole left to stand for twenty-four hours. Then the potassium iodide solution (10 Cc.) is added, and after one hour the iodine liberated is determined with decinormal solution of thiosulphate, after having made a similar determination without adding oleic acid. The difference between the two results gives the iodine number. If fat is separated on adding the potassium iodide solution some chloroform is to be added, or an alcoholic solution of potassium iodide may be used. As hydrochloric acid and other chlorinated products may be formed by passing chlorine into alcohol, Seeliger recommends dissolving the iodine in carbon tetrachloride, and afterwards making up to 250 Cc. with alcohol or ether (*Pharm. Centralh.*, xxxv, No. 7.)

Spices and Condiments.

Part 2 of Bulletin No. 13 of the U. S. Department of Agriculture, Division of Chemistry, is devoted to a popular exposition of the origin of spices and the means employed for their adulteration, and contains as well an extended technical discussion of the subject and of the results of analysis both microscopical and chemical, and the methods which have been proposed by recent authorities for the detection of sophistication. The report is the work of Clifford Richardson and is certainly a masterful performance. We print below the sections relating to the more commonly used spices and condiments. The table of contaminations which begins the excerpt here given will furnish an idea of the extent to which the ingenuity of spice mixers has gone.

TABLE OF SPICES AND ADULTERANTS.

Spices.	Adulterants.
Allspice	Spent cloves, clove stems, cracker dust, *ground shells* or charcoal, *mineral color yellow corn.*
Cayenne	*Rice flour*, salt and ship stuff, *yellow corn, turmeric*, and *mineral red.*
Cassia	*Ground shells* and *crackers, turmeric, minerals.*
Cinnamon	*Cassia*, peas, starch, *mustard hulls, turmeric, minerals, cracker dust, burnt shells* or charcoal.
Cloves	*Spent cloves, clove stems, minerals*, allspice, roasted shells, wheat flour, peas.
Ginger	*Cereals, turmeric, mustard hulls, cayenne*, peas.
Mace	Cereals or starch, buckwheat, *wild mace.*
Nutmeg	Cereals or starch, wild nutmeg.
Pepper	*Refuse of all sorts, pepper dust, ground crackers*, or *ship stuff: rice, mustard hulls, charcoal*, cocoanut shells, *cayenne*, beans, *bran, yellow corn.*
Mustard	*Cereals* and *starch, turmeric*, peas, *yellow corn meal, ginger, gypsum.*

The materials in italics have been identified in spices examined in the laboratory of this division, but some of the commoner adulterants have not been found. Considering the spices individually there are certain peculiarities, as they are met with pure and in the trade, which should not be overlooked.

MUSTARD.

Mustard, as sold in the ground state, should be the farina or flour of the black or white mustard seed—that is to say, the flour from the interior of the seed bolted or separated from the hulls. The two kinds of seed, although derived from plants of the same genus, are somewhat different in their chemical composition. The black seed is much the most pungent, and develops, on mixing with water, a volatile oil, which gives this condiment its penetrating character. There is also present in the seed a complicated organic substance of a bitter nature, to which is due some of the peculiar flavor, and while the white seed forms no volatile oil with water, it contains more of the bitter substance. It is, therefore, very common to mix the two in grinding. The sources of the seed are various. In our markets at present there are quoted California black and white, Dutch, Trieste black, and English—the last being the most valuable.

In the manufacture of the seed into flour for the market two customs have arisen which change the nature of the original substance, and therefore would commonly come under the head of adulteration. One is extremely old, the addition of wheat flour for the purpose of making the condiment keep better. This necessitates the restoration of the yellow color by turmeric, or other dye stuff. These diluents are harmless, as a rule, but there seems to be no reason for their use, and it is gradually becoming commoner to find mustard free from them in English brands.

The other custom is the abstraction of the fixed oil by pressure before grinding the seed. The percentage of this oil is over 30. It adds nothing to the flavor of the mustard, probably injures its keeping qualities, makes the seed more difficult to mill, and its removal is therefore a benefit. It is a nearly universal custom at the present day in this country, and is not considered as fraudulent by the Canadian analysts.

Falsifications of mustard other than those mentioned are not common, although gypsum has been found in low-grade mustard and several other adulterants, among them ginger of low grade. The hulls bolted from the flour in the process of manufacture are preserved and form the basis of the adulteration of many other spices.

PEPPER, BLACK AND WHITE.

Pepper is more in demand than any other spice, and in consequence is more adulterated. Its appearance in the ground form, especially of the black, is such as to make it possible to use all sorts of refuse, for this purpose, and almost everything that has been used as an adulterant has been found in pepper. White pepper, which is simply the black deprived of its outer black coats, is, of course, less easily falsified; but in France is diluted to an immense extent with ground olive stones, which bear a striking resemblance. Among the samples from Washington grocers pepper sweepings—that is, husks and dirt—rice or corn, and mustard hulls were the commonest admixtures. Sand is said to be very commonly added abroad, but has not been met with here. In Canada and New York ground cocoanut shells are a cheap source of adulteration, but they have not extended so far south.

Specimens from Baltimore mills of very low quality goods were found to contain but little pepper, and that of the worst quality, being made up of cracker dust, yellow corn, cayenne, and charcoal in so disgraceful a way as to be visible to the unassisted eye on close examination.

The quality of a ground pepper can be told by an expert from its weight and color, and on examination with a lens of low magnifying power. The particles are not coarsely ground, and it is not difficult to pick out pieces of husk, yellow corn, and rice, and, if necessary, a more careful investigation under a microscope of higher power will serve for confirmation. Black pepper, in our experience, is much more liable to adulteration than white, although it is perfectly easy to dilute the latter with broken rice or cracker dust, which are inexpensive. All these materials, fortunately, owing to the grossness of the adulteration, are readily recognized, and there is hardly the necessity for recourse to chemical analysis. There has been, however, considerable investigation in this direction, so that there are means of confirming the optical examination which are of great value. Determination of the amount of starch is one of the methods upon which some reliance can be placed; for if under the microscope foreign starch is not detected, then the addition of "P. D" or other starch free adulterants will diminish the percentage found, and the reverse. In this way, too, one is able to arrive at an approximate conclusion as to the proportion of adulterants added, which can only be estimated within wide limits under the microscope.

In spite of the immense amount of adulteration, it is possible, from the best shops to obtain pure ground peppers, but it is at the same time safer with a family spice mill to grind the whole berries as they are needed. The sources of our pepper supply are Tellicherry on the we, coast of Hindostan, which is graded high and Penang and Singapore for the East, Sumatra, Java, etc. The importations are principally through London and not direct. The supply of ground pepper from England will usually be found more pure than our own brands, and at the same time is naturally more expensive.

CAYENNE OR RED PEPPER.

This condiment should consist of the ground pods of any of several species of *Capsicum*, known as chilies or peppers. It is said to have been adulterated with many substances, brick dust, red lead, and coloring matters; but this has only been found to be the case in two cheap Baltimore cayennes, while in Washington only rice has been detected, but that quite frequently. Inferior material is no doubt often ground, but the small value of the pods and the small quantity consumed does not tend to increase adulteration.

GINGER.

Ginger is the root, or, technically, rhizome, of a plant somewhat similar in appearance to our iris and flag. It is grown in various parts of the world and prepared with great care and great carelessness, being at times scraped and bleached, at others simply dried in any condition, so that there is an immense number of varieties and qualities to be found in the market. They all, however, retain sufficiently the marked peculiarities of the starchy fibrous root to make the detection of adulterants easy. The common ones are the addition of wheat flour or some starch as a diluent, the coloring with turmeric to suit a popular fancy for gingerbread or of spent material which has been used in making tincture. Mustard hulls and cayenne are also found in some cases but have seldom been detected here. They are added to give pungency and make up for the addition of flour. Their detection is easy. The sources of our supply are Jamaica and the West Indies, Cochin China, Africa and India. Jamaica is the best and most carefully prepared.

CLOVES.

The flower buds of the clove tree carefully picked and dried constitute the spice known by that name. Their valuable properties are due to the volatile oil which they contain, the best having as much as 16 per cent.

The removal of this oil is so very easy that it is the commonest method of deception to do so before grinding the spice and to then dispose of it as pure. We have ready means of determining the loss loss chemically, but the microscope gives no indications. The addition of the cheaper clove stems is also practiced, as they cost but 6 cents when the buds cost 27. The microscope reveals their presence by certain cells which they contain which are absent in the buds.

Pimento is sometimes substituted in part or entirely, as it has a clovelike flavor but only 4 or 5 per cent. of volatile oil. It is worth less than one fifth the price of cloves. Its chemical composition and its structure, that of a berry, reveals its presence. The addition of the coarser adulterants, mineral matter, cocoanut shells, flour, peas, and the like, have only been observed in two instances, but no doubt frequently occur, as has been found in Canada.

The sources of our supply are the East Indies (Amboyna), African (Zanzibar), and American, ranking in value in the order named. Cloves should, if possible, be always purchased whole, as they deteriorate less readily in that form.

CINNAMON AND CASSIA.

These spices are the barks of several species of the genus *Cinnamomum*, the true cinnamon being a native of Ceylon, where it is largely cultivated and the cassias being derived from several other species growing in China, India, and the East Indies. Cinnamon as it reaches the market is very thin, the outer and inner coats of the bark having been removed. Cassia on the other hand is thick, as it consists of the entire bark and can be distinguished by its retaining its natural outer surface. Cinnamon is by far more valuable than the cassia, as there is a smaller supply and intrinsically it contains a much greater proportion of volatile oil and that of higher and more delicate aroma. In consequence cassia is largely substituted for cinnamon, and in fact not a particle of ground cinnamon can be found in the market. It can be found in the whole condition in good quality only in drug stores. Cassia exists in many forms and qualities, and sells at wholesale at from 7 to 40 cents a pound. That known as Saigon is the best, and that exported from Batavia the poorest. Cassia buds also hold a small place in the market.

The detection of the substitution of cassia for cinnamon, since the barks are of trees of the same species, is more difficult than is usually the case and may prove troublesome to a novice. The presence of more woody fiber in the latter with the aid of chemical analysis serves, however, as a reliable distinction. In the samples which have come into our hands, not a particle of material labeled ground cinnamon proved to be anything other than cassia. The spice millers appeared, however, to be satisfied to stop at this point and in only one case was there addition of cheap stuff to the cassia. When added there is no difficulty in detecting it, as has been done here and in Canada, where peas, starch, ground shells, and crackers have been found in powder labeled both cassia and cinnamon.

The barks can, in most cases, and especially the cinnamon, be used nearly as well in the whole condition and should at least be so purchased and then ground. A slight acquaintance with the appearance of the different qualities will teach one the proper selection to make.

NUTMEG AND MACE.

These spices are different portions of the fruit of a tree known as the nutmeg tree, *Myristica fragrans*, the nutmeg being the inner kernel and the mace one of the outer coats or arillus. The tree grows principally on the Banda Islands and the spices reach us through London. They can always be obtained in their original condition and should be so purchased. When ground they are mixed with diluents of various descriptions, principally cereals and their refuse, which are easily detected.

Owing to the infrequency of the sale of the powdered nutmeg and mace, their adulteration has attracted but little attention.

Deodorizing Recovered Alcohol.*

BY EDWARD A. KADEL.

Here is a method that, with slight modifications, gives splendid results in my hands. I have not as yet found an alcohol so vile that I failed to purify it so as to render it fit for employment in general manufacturing.

The alcohol is first treated with caustic soda; for alcohol recovered from drugs like arnica, buchu, cubebs, etc, one ounce to each gallon is employed. After setting from two to five days it is distilled by water bath or steam jacket kettle. The alcohol first passing over must be returned to the still. This is continued until the odor is either changed or lost. Usually this distillation leaves an empyreumatic and sometimes a soapy odor to the alcohol. It is then redistilled with potassium permanganate; the quantity to be used can be determined by experience alone, alcohol recovered from the same drug at different processes requiring different proportions; usually one to four drams to a gallon is employed. Thus treated it is generally clean enough for re-employment for manufacturing purposes, seldom producing any coloration with hydric sulphate. If further purifying is desired again distill with the permanganate and filter through animal charcoal, but unless the charcoal is freshly prepared this is useless. If I have not fresh charcoal, I add a small quantity of distilled water and distill again after second treatment with the permanganate.

From the standpoint of economy this process certainly is unobjectionable. I employ a five gallon still of my own construction, a fair average of three gallons an hour by water bath being its working capacity. Time, gas and material I find is fully compensated for, and in laboratories equipped with steam the cost of purifying is reduced to a minimum. The process requires no attention after it is once under way; I seldom go near it after complete automatic action of the still has been secured.

*Indiana Pharmacist.

A New Salt of Silver

The *Zeitschrift für Hygiene and Infectionskrankheiten* (vol. xxi., 1894) contains a report entitled "*Ueber den Desinfectionswerth des Aethylendiaminesilberphosphats und Aethylendiaminkresols*" by Dr. Jean Schaeffer, assistant physician at the University Dermatological Clinic of Breslau. These elaborate series of experiments have been conducted for a considerable length of time under the direction of Professor Neisser at Breslau.

The experimental investigation and clinical experience of the last few years have tended to heighten the esteem in which the antiseptic action of silver solutions is held. Numerous researches prove the very great germicidal properties of silver compounds, which under some conditions surpass even those of corrosive sublimate, and the successful employment that silver nitrate has found in medicinal practice fully confirms the favorable results of experiment.

In the treatment of gonorrhœa dilute silver solutions have indeed been demonstrated superior to other remedies and have supplanted most. A drawback of no mean significance has, however, hitherto marked the therapeutical employment of silver nitrate. From the most recent investigations it is known that the gonococci, after a comparatively short time, penetrate deep into the epithelium. Consequently it is an absolute necessity that the remedy employed should not only have a superficial action, but should be able to reach and kill the disease germs in the deeper tissues. These conditions are only partially fulfilled by silver nitrate. Its action is comparatively superficial. It forms insoluble compounds with sodium chloride and albuminoid substances, which not only remain on the surface themselves but bar the way into the interior to the rest of the solution.

A demand has, therefore, been felt for a silver solution, which, while retaining the energetic bactericidal properties of silver nitrate, shall not form insoluble compounds with chlorides and albuminoids. This want has been supplied by the preparation of an ethylenediamine silver phosphate solution. The specific value claimed for this new salt is based upon the observation that the base ethylenediamine has a very good corrosive action and that on addition of the alkaline silver solution to a sodium chloride or albuminous liquid no precipitate, but only a faint opalescence, is formed. The phosphate and not the nitrate has been selected to avoid any possible reaction of the ethylenediamine nitrate that would be formed.

Ethylenediamine silver phosphate is a colorless, clear liquid which contains twice as much ethylenediamine as silver phosphate; the alkaline reaction of the solution is dependent upon the amount of ethylenediamine present, and 100 Cc. of a 10 per cent. solution is equivalent to 333 Cc. normal soda solution. Like all silver salts the preparation must be preserved in the dark as it is extremely susceptible to change.

Ethylenediamine silver phosphate is being introduced to the medical and pharmaceutical professions in the United States by Schering & Glatz, importers of drugs and chemicals, 55 Maiden lane, New York, to whom all applications for example of literature on the newer remedies should be made.

Examination of Commercial Preparations of Phosphates of Iron and Alkaloids.*

BY MILTON F. SCHAAK.

In order to ascertain by analysis the composition of these commercial preparations this work was undertaken. In order to make the quantitative determination of important constituents as rapidly as possible, and with sufficient accuracy, the following process was devised and followed.

Five to ten grams were taken, diluted with water, heated to expel alcohol, put into a separating funnel, ammonium citrate added (when needed), made alkaline with sodium hydrate and shaken with 3 or 4 successive portions of chloroform until all the alkaloids were removed. The combined chloroform solutions were allowed to evaporate, and the residue dried at 100° C. for one hour, and weighed as total alkaloids.

A portion of this alkaloidal residue indicated quinine by the fluorescence of the acid solution, the thalleioquin reaction, and the formation of a precipitate by ammonia water, soluable in excess.

Strychnine was indicated by moistening a film of the residue with H_2SO_4 and adding a minute fragment of potassium dichromate, when a fading purple color resulted.

The liquid from which the alkaloids had been removed, after being heated to expel remaining chloroform, was treated with a little ammonium chloride, and ammonium sulphide added in excess, the bottle completely filled, corked and set aside until the supernatant liquid acquired a yellow color without a tinge of green.

The precipitate collected upon a filter and washed with dilute ammonium sulphide, with precautions against oxidation, was dissolved in dilute HCl, the solution heated, filtered and thoroughly oxidized with small quantities of nitric acid.

* *American Journal of Pharmacy.*

This ferric solution was strongly acidulated with hydrochloric acid and a little copper sulphate and potassium sulphocyanate added.

Decinormal volumetric solution of sodium hyposulphite was now run in until the red color of the liquid was discharged, a little starch paste added and the excess of sodium hyposulphite determined by a corresponding strength solution of iodine.

The iron was calculated from the amount of sodium hyposulphite used.

The phosphoric acid was precipitated as ammonium magnesium phosphate, by adding magnesia mixture to the ammoniacal liquid from which the iron had been removed (the ammonium sulphide not interfering); after the precipitate had thoroughly separated it was washed with ammoniacal water and dissolved in a small quantity of acetic acid and sodium or potassium hydrate added, allowing the solution to remain slightly acid.

After the addition of a few drops of cochineal test solution, heat was applied and volumetric solution of uranium acetate run into the hot liquid, until a small excess of uranium producing a green color with the cochineal indicated the end of the reaction.

The uranium solution having previously been standardized under similar conditions, the phosphoric anhydride was calculated from the amount used.

Several samples of the scale phosphate of iron, treated according to the above, gave an average of 13.2 per cent. iron and 17 per cent. phosphoric anhydride.

The following table shows the specific gravity and average result of several analyses of each preparation of elixir phosphate of iron, quinine and strychnine; syrup phosphate iron, quinine and strychnine, and several chemical foods.

All the elixirs claimed to contain 2 grains phosphate of iron, 1 grain salt of quinine and $\frac{1}{10}$ to $\frac{1}{15}$ grain strychnine.

Number.	Specific Gravity.	Per Cent. Fe.	Per Cent. P_2O_5.	Total Alkaloids
1	1.17	.39	.52	1.33
2	1.09	.32	.20	.79
3	1.06	.26	.22	.30
4	1.12	.40	.15	1.80
5	1.06	.37	.45	.20
6	1.08	.37	.43	.60
7	1.09	.17	.29	.70
8	1.14	.45	trace	1.35
9	1.08	.36	trace	1.16
10	1.30	.034	3.00	.44
11	1.34	.31	.27	—
12	1.18	.34	.25	—

No. 1, made by the writer, contained 2 grains scale phosphate of iron, 1 grain quinine sulphate and $\frac{1}{15}$ gr. strychnine to a fluid drachm.

This preparation formed a precipitate when mixed with water, and, on being exposed to light, gradually became darkened in color.

No. 2, a commercial preparation labeled to contain same as above, was of a light greenish color, and clouded slightly on addition of water.

Nos. 3, 4, 5 were light greenish color and mixed with water without precipitation. No. 4 was stated to contain half the amount of iron as citro-chloride, and the alkaloid quinine.

Nos. 6 and 7 were dark colored, and did not precipitate when mixed with water.

Nos. 8 and 9, made by prominent manufacturers, are considered standard preparations. They did not precipitate on standing, and were miscible with water; 9 was a beautiful elixir of bright green color and enjoys perhaps a larger sale than any other; it was labeled to contain the full quantities of ingredients

No. 10 was a syrup, and labeled to contain 1 grain phosphate of iron, ¼ grain muriate of quinine, other phosphate and free phosphoric acid to a fluid drachm.

Nos. 11 and 12 were chemical food or syrup of phosphates, and should contain 1 gr. phosphate of iron to each fluid drachm.

Powdered Medicinal Extracts.*

By William B. Thompson.

Solid extracts of vegetable drugs to be of requisite quality should possess, in a marked degree, the distinguishing characteristics of the material of which they are made. Each should present a distinctive individuality and in those substances in which the active constituent is alkaloidal, precise assay should show a full average percentage. Odor and taste should be wholly preserved, and that excess of inert matter, usually denominated "extractive" and largely predominating in this class of articles as usually found, should be avoided or materially diminished by skill of process. The choice of a proper solvent or menstruum for the active properties of a drug involves experience and extended observation. Error in, or indifference to this essential is quite likely to result in a minimum of active constituent loaded with a maximum of "extractive." Both physician and pharmacist will realize that this means a gain in bulk and weight, and thereby a commercial advantage, but the therapeutic purpose and object are lessened to a culpable degree. The initial point, of course, in this as in all other classes of finished pharmaceutical products, is the selection of good, sound drugs —a quality of which, better than the average, is not too good, and often not good enough. Then the process in all its detail of reduction from liquid to solid, should be carried from beginning to full completion, within the vacuum still or vessel, at such controlled or regulated temperature that heat can in nowise prove a destructive element. As complete an exclusion of surrounding atmosphere as is possible precludes that tendency which, it is known, induces a change in the state of single and associated alkaloids, and disturbs that nice adjustment in which these exist in a native or natural condition With the application of a proper degree of skill and the scrupulous pains which such important agents as medicinal extracts should always receive at the hands of the manufacturer, it is believed that this class of products can be made to present such unusual features of excellence as are not generally met with in commerce.

Did the conditions of demand and use justify entering upon the preparation aright, of solid extracts, among the other operations of the dispensing pharmacist, and could the necessary apparatus be satisfactorily applied, the character of products would prove quite a revelation in knowledge to the uninitiated—that is to say, that the attainment of complete and perfect products result in a class of preparations so totally unlike what we are accustomed to see as to offer suggestive ideas to the novice and the student. We should be enabled to learn much more than the limited knowledge we now have of the substance known as "vegetable extractive." Of course, we are aware that those active and potent principles of vegetable substances are intimately associated with and closely involved with the juice, sap and plant composite. But we must acquire a knowledge of how these can be separated from each other without injury to each, and must learn, moreover, that the material from vegetable structure and organism, which yields to the solvent action of liquids, varies greatly under different circumstances in kind, quality and amount of bulk. This clearly points to a need of more knowledge of the character, proportion and quality of menstruum which should be employed. Percolation with warm and cold solvents: the use of that percentage of spirit which would solve neither sugar nor gum, a prolonged action of aqueous menstruum inducing a certain chemical union of starch and tannin: the formation and character of "apotheme" that almost inevitable concomitant of vegetable infusions; the changes of color which occur in the course of evaporation or concentration; existing conditions of atmosphere favorable or unfavorable to drying and powdering—these are a few of the numerous agencies which merit study and attention, and which, if not bestowed at times during the progressive stages of manipulation, will result in unsatisfactory and, it may be, indifferent products.

The specimens here presented in illustration of the statements made show marked peculiarities, and they are each dissimilar, yet are wholly natural products, and may be said to represent advanced ideas, certainly they do represent good products, and are worthy of close attention. The containers or bottles are purposely large; this is intended to give a mobility to the powders and opposes an existing idea that such substances should be compactly bottled to exclude the air.

* *American Journal of Pharmacy.*

Odor of Benzoic Acid.—J. Passy, continuing his work on the limits of perceptibility of odors (*Pharm. Journ.*, [3], xxiii., 987), points out that, while stearic acid is odorless, and its aldehyde, alcohol, and ethers the same, in the case of benzoic acid and its associated compounds the acid alone is odorless, and this only when pure and in the crystalline form. If diluted with any medium the characteristic odor at once reveals itself, as was proved experimentally when the acid was diffused in aqueous vapor or an aqueous solution warmed. A similar result was produced by the spontaneous evaporation of a one per cent. alcoholic solution on a watch glass or a piece of filter paper. Arohnsohn has shown that, though the odors cannot be perceived when solutions of odorous substances in pure water are introduced into the nostrils, this is due to the action of the water on the olfactory cells, and may be overcome by dissolving 0.6 per cent. of sodium chloride in the liquid and warming the latter to the temperature of the body. Under similar conditions the otherwise inodorous benzoic acid, in the proportion of one part in one thousand, yielded a clearly perceptible odor. Identical results to the above were obtained with cinnamic acid. Passy considers, therefore, that these compounds may fairly be regarded as odorous, as much so as vanillin, coumarin, and other compounds of the aromatic series, which are odorless below the temperature at which they volatilize. He concludes also that the so-called inodorous bodies may be divided into two categories: 1. Thosewhich are, for normal humanbeings, beyond the limits of perceptibility by the sense of smell, such as stearic and other fatty acids, beyond the fourteenth term. 2. Those which may, under ordinary conditions, have no perceptible odor, such as benzoic and cinnamic acids, etc. (*Comp. rend.*, cxviii., 481).

The New Swiss Pharmacopœia.

BY C. JEHL.*

In 1865 the Swiss Society of Pharmacists published for the first time a "Pharmacopea Helvetica" in the Latin language. This work, a second edition of which was published in 1872, and a supplement to the latter in 1876, was not official, but optional, since it was not originated by the State. It is none the less true, however, that it is due to this previous work of the Swiss pharmacists that the third edition, just published, is official and obligatory for the whole Confederation, except the canton of Glarus, which has profited by the occasion to affirm its retrograde ideas and render itself immortally ridiculous. In 1889, the Federal Council appointed a commission of pharmacists, medical men, veterinarians, and chemists, to elaborate a Swiss official pharmacopœia. This commission ended its labors in April, 1893, and decided to publish the work in the three languages used in Switerland, instead of in Latin as formerly. There will thus be three separate editions—French, German and Italian. To preserve the same alphabetical order in all three, the Latin denominations of the drugs, etc., have been retained, and these are followed by synonyms in the other languages.

This pharmacopœia bears an international stamp which will contribute strongly, it is to be hoped, toward the realization of the dream of the Pharmaceutical Congress—*i.e.*, the publication of a universal pharmacopœia. Thus from the German Pharmacopœia it borrows the methods of classing and labeling active remedies and poisons, an excellent arrangement which we have strongly appreciated in Alsace, and ought to be general. The ordinary preparations are indicated by black letters on a white ground; more active ones by red letters on a white ground; while poisons are shut up in a cupboard and indicated by white letters on a black ground. The same regulations apply to the cellar and storerooms.

Distilled water alone is recognized. This is also according to the German Pharmacopœia, but here (Alsace) the rule only exists on paper; for, since the enforcement of obligatory assurance against sickness, there is frequently an indisposition to pay for distilled water, and the pump has assumed its former position. The pharmacist often finds himself in a very perplexing situation on this account; for, on the one hand, the Imperial Chancellor's office orders, by its official pharmacopœia, the employment of distilled water alone in all preparations, without exception, and, on the other hand, the local authorities intimate to him the desirability of economizing in the formulæ and using distilled water only where absolutely necessary.

Substances sensitive to light are to be preserved in yellow and black glass receptacles. An excellent innovation, which the German Pharmacopœia had already borrowed from that of the United States, is the specification of the degrees of fineness of the sieves used for powders and substances reduced by cutting. This is one of the most important points in modern pharmacopœias, because it contributes, in great measure, to the uniformity of laboratory preparations. The Swiss Pharmacopœia uses seven distinct sieves, one more than the German, and has accordingly finer powders and coarser species than the latter.

The work resembles the French Codex in its wide choice of formulæ and methods of manufacture of a certain proportion of chemical products which the German Pharmacopœia is content to fix a standard of purity for. Such conciseness in the latter necessitates the publication of extensive commentaries to compensate for official brevity. A preparation for which a formula might have been included is bismuth salicylate, commercial specimens of which have a very variable composition.

The distilled waters are simple in the case of plants rich in essential oil, and the others are concentrated to one-tenth with the addition of alcohol. There are five altogether, besides cherry-laurel (1 in 1,000) and rose waters. While the German Pharmacopœia recognizes one kind of cinchona only, the Swiss recognizes two—yellow (*Ledgeriana* and *Calisaya*) and red (*Succirubra*); and the French Codex three (gray, yellow, red), from numerous sources, and proving a veritable embarrassment of riches.

Where the Germans have ten plasters, the Swiss have fourteen, and the French twenty-three. A novelty, borrowed from the Americans, distinguishes the Swiss extracts, which are divided into fluid, soft, hard and dry extracts, one part of the last being equivalent to two parts of the drug. In the sixth edition of the U. S. P. these were termed abstracts, but they have been suppressed in the seventh edition. It would be preferable to see but two kinds of extracts, fluid and dry. Pharmaceutical work would thus gain in cleanliness and accuracy.

The latter part of the book contains the following tables: An enumeration of reagents and volumetric solutions; a table of solubilities; lists of active medicaments and poisons; maximum doses; a table indicating the proportion of active ingredients in the pharmaceutical preparations; a table of alcoholic strengths; one giving densities of solutions of ammonia, potash, and soda, as well as nitric, hydrochloric, and sulphuric acids; a comparison of degrees Beaumé with densities; two saturation tables for acids and bases; a reduction of specific weights according to temperatures; and a list of synonyms. There are eighteen tables in all. Finally, the index of contents is in four languages, including Latin.

The Swiss commission has produced a work worthy of modern science and representing an enormous amount of work, greatly augmented by the necessity of publication in three languages. But, by reason of this, the pharmacopœia will be consulted more than any other in the countries bordering on Switzerland, and thus probably hasten the amalgamation of the principal active preparations in the various European pharmacopœias. It is satisfactory to be able fully to congratulate the Swiss Pharmacopœia Commission, and particularly its president, Professor Schaer, director of the Pharmaceutical Institute at Strassburg.

*From the *Journ. der Pharm. von Elsass-Lothringen*, through *Pharm. Journ.*

Tincture of Iodine.*

BY C. F. HENRY.

Tincture of iodine has long been a subject of controversy, and after fifty years it cannot be said we have a satisfactory preparation, though various and varied have been its formulæ.

The Edinburgh Pharmacopœia tincture, which is still in considerable demand, had a strength of 1 in 16, and was made with alcohol alone, by the aid of heat. The London Pharmacopœia preparation, termed tinct. iodinii co., contained iodine 1 in 40, and potassium iodide 1 in 20. The 1864 pharmacopœia ordered 1 in 40 of iodine, with 1 in 80 of potassium iodide, and this was retained in the 1867 edition. In 1870 Mr. Martindale (*Pharm. Journ.*) [2], vol. xi., p. 601) pointed out that this proportion of potassium iodide was insufficient to render the tincture miscible with water, and in the 1885 edition the proportion was increased to 1 in 40, making the quantity of potassium iodide equal to the quantity of iodine.

A comparison with foreign pharmacopœias gives approximately the following results: French Codex, 1 in 15⅓; German and Russian, 1 in 13; United States, 1 in 14⅓; Austrian, 1 in 17; Dutch, 1 in 16. These are all made without potassium iodide, and are all very much stronger than the British preparation, which is 1 in 40. It is the weakness of the British tincture that has been most criticised, and it has several times been emphatically condemned.

Against the plea that the present tincture is too weak it may be urged that it is intended for internal use, and that the liniment is meant to supply the need for an external application. Against this plea I would urge, first, that the tincture is frequently prescribed for external use, and fails in its purpose. Secondly, that the tincture of the Edinburgh Pharmacopœia is regularly prescribed by many on account of its suitability, and the existing pharmacopœia should contain a preparation which would obviate recourse to an obsolete pharmacopœia. Thirdly, that the frequency with which the liniment is diluted when prescribed shows that it is too strong in most cases. Fourthly, because there should be no difficulty in having a preparation suitable for both internal and external use, which should take the place of the present tincture and liniment. To suggest a formula for such a tincture is the object of this note. The author detailed a series of experiments which pointed to the conclusion that the following formula most suitably met all requirements:

Take of

Iodine	1¼ ounces
Iodide of Potassium	1¼ ounces
Distilled water	½ fl. ounce
Glycerin	½ fl. ounce
Alcohol, sufficient to make	20 fl. ounces

Add the iodine and iodide of potassium to the water, allow to stand till dissolved, then add the glycerin and sufficient alcohol to make twenty fluid ounces. Such a tincture (1 in 16) would be suitable for both internal and external use, and is, like the present tincture, miscible with water in all proportions. The dose would be 2 to 8 minims, and 24 minims to the fluid ounce would make a vapor iodi corresponding to the present official vapor iodi.

* Read at a meeting of the Edinburgh Chemists' Assistants' Association.

Murcuria! Phenol —Desesquee statesll that, on adding mercuric chloride solution to an alkaline solution of phenol in molecular proportions, a substance is obtained having the composition represented by A. By using a large excess of alkaline phenol

(A) $Hg<^{Cl}_{O-C_6H_5}$ (B) $Hg<^{O-H}_{O-C_6H_5}$

solution the product has the composition represented by B, and on treating this with glacial acetic acid it is converted into C. Desesquelle has not been succsesful in

(C) $Hg<^{O-COCH_3}_{O-C_6H_5}$ (D) $Hg<^{O-C_6H_5}_{O-C_6H_5}$

obtaining a phenolate having the composition represented by the formula D.

The Fungus Kingdom.

PHYCOMYCETES; ASCOMYCETES; BASIOMYCETES; HYMENOMYCETES.

The increased attention given to the study of fungi especially from a biological point of view is one of the features of a scientific education in the present day. One of the difficulties which the novice encounters is the cumbrous terminology with which the science of botany in general and mycology in particular is overloaded. While anatomical facts and physiological phenomena must necessarily have distinctive names, it is most desirable that these should not be unnecessarily multiplied. It is a great mistake to imagine that because a man has learned the meaning of some few dozen technical terms he has therefore become a botanist. Science is apt to be hindered rather than helped by a too prolific nomenclature. One of the most important groups of fungi is the phycomycetes, or molds. They are characterized by their minute size, and to the ordinary observers are apparently unimportant. They are, however, an exceedingly interesting family in many ways. Molds multiply themselves in many ways, and afford some of the best marked instances of sexual reproduction. Molds are both saphrophytic and parasitic. Among the latter the salmon disease and the potato disease are only too well known. Horticulturists are familiar with another pest—"the damping off of seedlings;" while the young medical man who has to cure a case of ringworm in a fortnight, in order that the "child may go back to school," will have his work cut out. All these conditions owe their existence to molds. Among the ascomycetes some botanists place the so-called sprouting or yeast fungi (saccharomyces), one member of which, Oïdium albicans, is well known to us. The parasitic ascomycetes include the fungi which cause the peach blister—"bladder" or "pocket plums"—the vine and the hop mildew, the larch disease, the canker of apple trees, and the caterpillar sphæria. To the same group belongs the fungus which furnishes us with ergot. The interesting family of lichens in which the parasite and its host are mutually beneficial to one another was also described. The basiomycetes, like the other groups, contain both saphrophytic and parasitic species. Among the last named the Uredineæ and their associates, the Ustilagineæ, stand prominent in causing the rust and mildew in wheat, as well as smut and bunt, diseases of economic importance, and not mere scientific curiosities. The large family known as the hymenomycetes, the mushroom, is the best known and certainly the most highly appreciated member in this country (England), but which also contains such harmful species as the dry rot fungus and various tree-destroying parasites. The myxomycetes presents so many analogies to the animal kingdom that some botanists have gone so far as to rechristen them the mycetozoa.—*British Medical Journal.*

The Origin of Lemon Kali.

Toward the end of 1891 you asked me what was the force of the word *kali* as used in the name "Lemon and Kali," and you did me the honor of quoting my reply in a paper read before the Virginia Pharmaceutical Association in 1892, as shown at page 86 of the Appendix of the resulting "Proceedings." I showed that the carbonate of sodium of the preparation was really the ancient and original *kali* (ashes) of seashore sods and that this littoral sod-ash or carbonate of sodium, as we now term it, was called *kali* long before the metallic element of the inland "potash" was discovered and long before the name *kalium* was given to that element; hence that makers of "lemon and kali" are at all events not wrong in using the word kali for what contains no kalium; hence, anyhow, that there was the "force" of the word kali as so used.

The London *Chemist and Druggist* of May 20, 1893, has noticed your paper and reproduced my letter to you. The account caught the eye of my friend and colleague and pharmaceutical historian, Joseph Ince who at once sent to me some information on the subject, which I am sure you will be glad to possess, because it not only settles a question which I could not answer, namely, *why* the word *kali* was introduced into the modern name "Lemon Kali," but *by whom* it was so introduced.

It appears, according to Mr. Ince's late father, that one Charles Gomond Cooke of the celebrated English firm of Godfrey & Cooke not only was a sufficiently clever pharmacist to invent this effervescent saline on which you and I have corresponded, but being an astute man of business, and not wishing all the world to know at once how the article was made, was clever enough to invent its name; as well as, I may add, to devise for it special bottles, soon afterward and ever since used throughout English pharmacy under the name of "Salines." Thus for years did he hold a trade monopoly, by disguising a carbonate of sodium under its ancient name of "Kali," enhancing the mystery by the words "lemon and." Cunning compounder and far-seeing godfather, he deserves his reward. He has long rested beneath the sod himself, though his invention has continued to make some stir in the pharmaceutical world as a grateful effervescent saline.—Letter of Prof. John Attfield, London, to Dr C. B. Fleet, secretary of the Virginia Pharmaceutical Association, Lynchburg, printed in the Proceedings of the Association for 1893.

Assay of Manganese Oxides.

Last winter Mr. D. B. Dott showed how oxygen could be made without heat by allowing hydrogen peroxide solution to react with black oxide of manganese. A similar reaction is utilized by Mr. Adolphe Carnot (*Comptes Rendus*, cxvi, 1295) for assaying manganese oxides, but as the quantity of oxygen liberated from hydrogen peroxide is indefinite an acid is added whereby the quantity becomes definite --viz., double the available oxygen in manganese peroxide above MnO. M. Carnot's process is to fix on a suitable stand a 150 Cc. flask having a caoutchouc stopper with two perforations. Through one of these passes a straight tapped funnel tube or phial with a glass stopper, the point of which must descend to the bottom of the flask. The other aperture has a dry delivery-tube bent four times, ending in a graduated gas-jar, filled with water and arranged on the trough. We introduce into the flask 1 gramme of the manganese oxide reduced to a fine powder, then about 30 Cc. of water and 20 Cc. of nitric acid, which decomposes any carbonates present in the sample. We allow the carbonic acid to escape entirely; then insert the stopper, leaving the stopper open. We can then observe that not only the graduated jar, but also the delivery-tube, is filled with water up to the point where it emerges from the water trough. Close the stopper, pour into the funnel 20 Cc. of 10 vol. hydrogen peroxide, allowing it to flow gently into the flask, taking care to close the stopper as soon as the last traces of peroxide had passed. The action takes place at once without heat, and the escape of oxygen, which is at first very rapid, is completed in a few minutes if care is taken to shake the flask from time to time. Nothing then remains but to measure the volume of oxygen liberated and from it calculate the oxygen value of the manganese oxides used. For absolute accuracy the following is the formula for calculation, taking Vt as the gaseous volume, measured at the temperature t and the atmospheric pressure H The gas being saturated with moisture, the tension h is allowed according to the temperature. As the weight of 1 liter of dry oxygen at 0° and at 760 mm. is 1.4298 gramme, then we calculate in grammes the weight p of available oxygen in 1 kilo. of ore by means of the formula:

$$p = \tfrac{1}{2}Vt \times 1.4298 \times \frac{H-h}{760} \times \frac{1}{1 \times 0.00367t.}$$

Oil of Lavender.

Ed. Hirschsohn is contributing to the *Pharmaceutische Zeitschrift fur Russland* a useful series of papers on essential oils, in the course of which he gives particulars of samples of lavender oil which have been obtained from authentic commercial sources. It will be seen from the following table that the fractionation of the oils resulted in some valuable figures:

		1st Distillate.	2d Distillate.	3d, etc., Distillate.	Total.	Solubility in parts of 70 and 80 per cent. alcohol.			
						1st Distillate		2d Distillate.	
	Brand used					Pts.	P. c	Pts.	P. c.
1	Mitch.	26	20	47	93	2.4	70	2	70
2	"	30	20	34	84	6	70	1.8	70
3	Extra.	20	16	35	71	1.8	70	1.6	70
4	Superfine	30	24	43	97	3.4	80	2.4	70
5	"	20	21	45	85	2 2	70	2	70
6	I.	36	20	39	95	5.6	80	1.8	70
7	Drome.	26	20	43	89	1.2	80	2.4	70
8	Gallic.	30	18	35	93	6	8	2	70
9	M Blanc	24	22	43	89	15	70	1.8	70
10	Alpes.	18	16	53	87	1.4	80	1	80
11	"	14	14	49	77	1	80	1	80
12	Ordinary	28	20	51	99	14	80	1	80
13	Gallic.	27	26	39	85	3.6	80	2.8	70
14	"	18	18	59	95	1.4	80	3	70

The important point to notice is the ready solubility of the first distillate in 70 per cent spirit—viz, one part of the oil in 2 to 3 parts of the spirit. The solubility decreases very markedly on the addition of turpentine. Thus 20 per cent. of turpentine added to a pure oil gave a first distillate which was soluble to the extent of 1 in 12 of 70 per cent. alcohol, and 50 per cent. of turpentine reduced the solubility to 1 in 25 of 80 per cent. alcohol. It is also noticeable that most of the turpentine distils in the first fraction.—*Chem. and Drug.*

Since the metric system has been promulgated as official in the United States Pharmacopœia it may be useful to our readers to recall the fact that the United States fractional silver currency bears a simple relation to its various units, a relation that has been made designedly and by law. The half dollar equals 12½ grams, the quarter dollar 6¼ grams and the dime 2½ grams. Eighty half dollars are equal to 1 kilogram.

New Apparatus, Novelties, Etc.

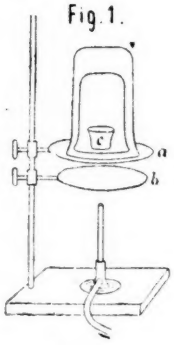
A New Sublimation Apparatus.

G. Oddo has published in the *Gazetta Chimica Italiana* the description of a new apparatus substantially as follows:

A stand (Fig. 1) supports on its two rings two asbestos sheets *a* and *b*. The sheet *a* has an opening in which is placed a thin beaker which is not very deep and in this is placed the substance to be decomposed.

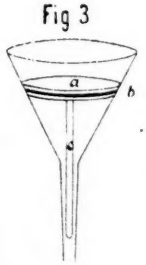
Two other larger beakers are invented over this, the inner one serving to arrest the sublimed substance, the outer one retaining all vapors which escape from the inner beaker.

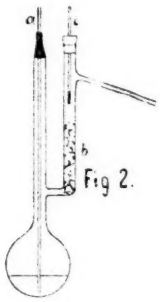
The sheet *b* serves to distribute the heat and should be placed nearer to or farther from the beaker according as the substance to be sublimed is more or less volatile. It is advisable to lay two sheets of paper over the upper sheet of asbestos, having holes in them to correspond with that in the asbestos.—*Pharm. Centralhalle.*

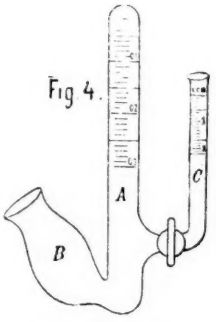


For Fractional Distillation.

L. Claisen describes an apparatus for fractional distillation as follows: (*Liebig's Annalau*, 277, 177–178; *Pharm. Centralh.*, 1894, p. 124): A dual distillation apparatus (Fig. 2) is provided on one side with a capillary tube *a* which reaches to the bottom and on the other with a thermometer *c*. It is advantageous to put some pieces of glass in the neck on the side *b*, to prevent the slopping over of the liquid. In using the apparatus with liquids whose boiling points are not too high, the space above the pieces of glass may be wholly or partially filled with glass thus combining the advantages of the Hempel column with those of the vacuum apparatus. These flasks are made by C. Heintz & Co. of Aachen, Germany.







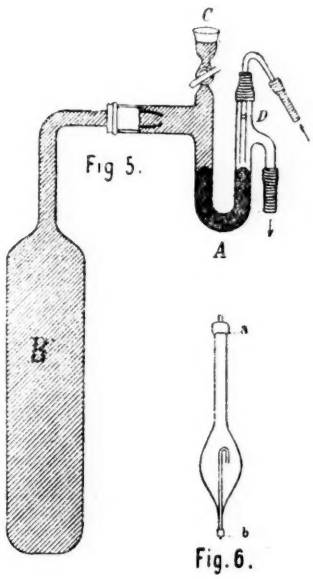


Fig. 6.

Improved Porcelain Filter Plate.

Max Kähler has received an improved porcelain filter plate which is shown in Fig. 3 (*Zeit. f. anal Chem.*, 1894, 64; *Pharm. Centralh.*, 1894, 124). This plate lessens the probability of breaking the funnel and it is always in the comet position. The edge of the plate is fitted with a rubber ring, while through its center a glass tube passes down into the neck of the funnel.

Hinds' Ureometer.

Fig. 4 shows a variation in the shape of the ureometer proposed by Hinds (*Chemist and Druggist*). The tube *A* and the vessel *B* are filled with bromide solution (40 Gm. of caustic soda, 100 Gm. of water and about 2 Cc. or 4 Gm. of bromine). The urine is place in the open tube *C*. By opening the stopcock in this tube one Cc. of urine is allowed to flow into the bromine solution in which the free nitrogen is afterward estimated.

Traube's Thermostat.

In his work entitled "Physikalisch-chemische Methoden" J. Traube illustrates a valuable form of a thermostat shown in Fig. 5. It consists of a U-shaped tube *A* to which is attached by means of a rubber stopper a medium small cylindrical tube *B*, which is filled either with an oil or with a concentrated solution of calcium chloride. A sufficient quantity of mercury is then poured in through the funnel. The air in the space between the mercury, cylinder *B*, and the funnel *C*, is then entirely replaced either by oil or by calcium chloride solution. The influx and egress of the gas to the burner is shown by the arrows. The cylinder *B* should be thrust into the water bath or drying closet, which is to be maintained at a uniform temperature.—*Pharm. Centralhalle.*

Landott's Pipette.

According to J. Traube ("Physikalisch-chemische Methoden") the proper way to determine solubility is to mix the solvent with an excess of the powdered substance and allow to stand, with frequent agitation, at a uniform temperature for from 2 to 3 hours. After allowing the solution to settle Landott's pipette, see Fig. 6, is suitable for drawing off a definite quantity of the solution. This should have the same temperature as the solution. The pipette may be closed by *a* and *b*. The quantity of the solution is determined by weighing and the pipette afterward rinsed out.

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Modern Botany.

Prof. J. Reynolds Green, professor of botany to the Pharmaceutical Society of Great Britain gave a lecture on "Recent Work on the Physiology of the Pollen Tube" to the Liverpool Biological Society, on March 9. The lecturer described minutely the process of germination of the pollen grain, which he said is easily observed under the microscope. If the grain be treated with a solution of chloral hydrate containing iodine the grain is rendered transparent, and granules of starch contained therein are stained violet. There are a large number of starch granules present, except in young grains, when there are few if any. These starch grains are seen to travel gradually down the pollen tube, and slowly separate from each other; then, passing to the point of activity (the apex of the tube), their character becomes changed, first into dextrine, and next into sugar. This is beautifully seen in the pollen tube of the lily; as the granules approach the apex their color (violet) changes into red, indicating dextrine. Thus the pollen grain ministers to the nutrition of its own tube. There are in the tubes granules which are not starch, and they are extruded from a very minute orifice at its apex. It is not an unreasonable hypothesis that these granules are enzymes, which play an important part in the nutrition of the tube. If the style of the lily be examined at the right age it will be found that starch is being carried to it by the fibro-vascular bundles and then formed into small granules, providing in this way more nourishment for the pollen tubes. This is observable in both longitudinal and transverse sections. Further provision for the nourishment of the tube is made in the form of malt sugar—probably the result of the action of the enzymes on the starch granules. At a certain age the enzymes are found to increase; also the starch exceeds what is found in the tube originally, and it is supposed that the tube stores away at first more nutritive matter than it requires, in order to provide for contingencies. In the pollen of the *Zamia* there is no starch, but if the tube be placed in a solution containing sugar—say the pulp of the apple or pear—starch at once begins to form. Sugars (malt, grape and cane) are frequently found in the tube instead of starch.

SPRAY IN SIMPLE CHRONIC RHINITIS.

[*Medical Press and Circular.*]

Sodii boratis	gr. xv
Sodii bicarbonatis	gr. xv
Ol. eucalypti	♏ ij
Thymolis	gr. j
Mentholis	gr. ss
Glycerini	℥ ss
Aq., ad	℥ j

Add two teaspoonfuls to one ounce of warm water and use as a spray.

Medical Notes.

Treatment of Acne.—

Ichthyolis	℥ iss
Etheris sulph	℥ iis
Alcohol	℥ ss

To be used externally. The application should be dabbed over the acne spots several times daily.—*Med. Press and Circular.*

When there is much pustulation (*acné varioliforme*) the following ointment may be used :

Bismuthi subnitratis, Hydrarg. ammoniati, Ichthyolis	aa gr. xxx
Vaselini, ad	℥ j

For external use. Every evening at bedtime, the acne pustules must be smeared with this ointment.

Sedative Plaster.—

Lead plaster	10 parts
Extract belladonna, Resin pinus sylvestris	of each 1 part

Spread on linen in the manner of an adhesive plaster, and apply over the painful sites in rheumatism, pleurodynia, etc.

Goldbeater's Skin is said to be good for cracked nipples. M. J. Blechmann (*Paris Medical*) advises the treatment of cracked or fissured nipples by means of gold beater's skin. Over the nipple affected, after wetting with water, a piece of skin is applied, first being pierced with a number of holes by a needle. The skin takes the form of the nipple, and adheres like a second epidermis. After each nursing a new piece is applied.

Treatment of Psoriasis —The following local treatment is found to be very serviceable by Dr. Eddowes (London). The various patches are painted, after removal of the scales with soap and hot water, with a saturated solution of tincture of iodine, about once a week, and an ointment consisting of equal parts of the ung. sulphuris, and the ung. picis liquidum applied daily. Another useful application is the following :

Ung. picis liq	℥ iiss
Acid salicylatis	gr. xxv
Ung. lanolini, ad	℥ j

The Therapeutic Use of Salophen.—According to Siebel, Guttman, Koch, and others salophen possesses all the advantages, without the disadvantages, of salicylate of soda, and it is also superior to salol. It is prepared in the form of a white flocculent powder, has neither smell nor taste and is of neutral reaction. In cold water it is insoluble, but is freely soluble in hot water, alcohol and ether. Its greatest advantage, however, appears to be that of relieving pain, as for example in cases of acute rheumatism. Also in neuralgia such as intercostal, dental, and other forms it acts as a powerful analgesic. In a case of tabes with much cephalalgia it acted like a charm in the relief of the latter symptom. The dose is from seven grains to half a drachm a day taken either in the form of powders, pills, or in cachets.

Rubidium Iodide.—Dr. S. Leistikow (*Monat. f. Prakt. Derm.*) reports the results of his therapeutic experiments with rubidium iodide. The author employed a 5 per cent. aqueous solution in eight cases, seven of which were definitely cured, on the average, in 14 days. One of these patients suffered from two ulcers specific of the hard palate. After local cauterization for 3 days, with 10 per cent. chromic acid, by which the ulcer bottom was cleansed, rubidium iodide was administered internally. Complete cure after 14 days, without any influence on the cardiac condition.

The rubidium salts are not cardiac poisons, like those of potassium, for which reason they are to be recommended as succedanea. No gastric disturbances are reported. The taste of rubidium iodide is not as disagreeably salty as that of potassium iodide.

Salophen —Köster (*Therap. Monatsh.*, January, 1894) has used salophen in 30 cases of acute rheumatism, a few 15-grain powders often sufficing to remove all pain; exudation into the joints also disappeared as a rule. The administration was usually continued during four days, 4 to 6 doses per diem being given. The only unpleasant symptoms noticed were vertigo on three occasions, and drowsiness and excessive perspiration four times. No gastric disturbances were observed. Extension of the disease took place twice and relapses also occurred twice ; these, however, were at once relieved by a repetition of the treatment. Salophen is not a powerful antipyretic, but is more effectual in neuralgic and similar affections. One case of severe brachial neuralgia is quoted which had resisted all other known antineuralgic remedies, and which was cured by 1 drachm of salophen given on four successive days.

Hemorrhoids —Engle has employed with good results suppositories of aristol prepared as follows:

Aristol	4.0
Ext. opii	0.15
Ext. belladon	0.05
Quinin. hydrochlor	1.5
White wax, enough to form six suppositories.	

Sig.: Use twice daily, morning and evening, after previous irrigation with cold water.

The author also advises after each defecation the application to the lower part of the rectum of the following ointment:

Aristol	2.0
Balsam Peru	4.0
Ung. simpl	30.0

As a purge he administers:

Potass. bitartrat.	
Flor. sulphur, aa	25.0

Srig.: One to two teaspoonfuls two or three times daily.—*Sem. Med.*

Treatment of Alopecia Areata.—Leistikow (*Monatsh. f. prakt. Dermat.*, January, 1894) for the last four years has used chrysarobin almost exclusively in alopecia areata. The results in total alopecia were satisfactory, though not reliable; in the partial affection the cures were 58 per cent., but among these relapses occurred in 30 per cent.; of these patients two-thirds were lost sight of, but the remainder were again cured and remained free. Formerly he only used the chrysarobin as a 5 to 10 per cent. ointment applied once or twice daily, but now he prepares a stick composed of chrysarobin 30, colophonium 5, cera flava 35, olive oil 30 parts, the application thus being more simple. Every evening the stick is rubbed over the affected part, which is washed clean with olive oil in the morning. In some days the skin often becomes irritable and red, when zinc ointment is substituted for a time. The author considers chrysarobin the best remedy in this affection.

"Antidiphtherine."—V. G. Grigorieff (*Vratch*, No. 2, 1894, p. 567), of Professor N. T. Filatoff's clinic in Moscow, used Klebs's specific in four cases of diphtheria in children, and came to the conclusion that the remedy is worthless. In spite of the paintings, repeated trice daily, false membranes continued to spread steadily, fever remained high or even increased, etc. Two children—one of whom aged 8, had been admitted on the third day of the disease, and the other, aged 15 months, on the second—died in forty-eight and twenty-four hours respectively. In a third patient, aged 4 years and 7 months, admitted on the fourth day of illness, who had been getting worse during a four days' treatment by "antidiphtherine," local applications of a 1 per mille solution of corrosive sublimate were substituted, with the result that the faucial deposits began to disappear, and the child ultimately made good recovery. Exactly the same course of events was observed in a boy aged 4 years and 7 months, in whom the "antidiphtherine" treatment was commenced on the second day of symptoms, but given up in about twenty-four hours, on account of a considerable aggravation of fever and local condition. The bichloride paintings cleared the child's throat in about four days. A set of elaborate experiments, undertaken by the author in order to test the bactericidal effects of Klebs's preparation, proved that (1) the latter does not in the least inhibit the development of diphtheria bacilli even after twenty-four hours' continuous contact; (2) a 1 per mille solution of Hg Cl_2 destroys the microbes even after a two minutes' contact; and (3) Hg Cl_2 has an additional advantage over "antidiphtherine," inasmuch as it kills any species of bacteria which happen to be present in a diphtheria patient's throat.

Generation of Gas in the Bowel for Intussusception.—Dr. J. T. C. Williams gives (*the Lancet*) a case of intussusception in an infant where an operation was not permitted and in which, after failure of all the ordinary methods, relief was secured by injecting, first a solution of 90 grains of citric acid, and second, slowly, a solution of 120 grains of sodium bicarbonate and then holding the nates firmly together. The injection was made by a catheter passed up 9 inches. Where a case is of long standing and gangrene has set in there is danger of rupture.

Artificial Immunity against Cholera.

Dr. Issaff of the *Berlin Institute für Infectionskrankheiten* has come to the following conclusions from the result of a series of unusually comprehensive experiments :

1. The intraperitoneal or subcutaneous injection of the blood serum of normal men, and also of acid, alkaline or neutral liquids (urine, bouillon, distilled water, physiological salt solution, etc.) gives guinea pigs a certain resistance against intraperitoneal cholera infection. This resistance is weak and transient and is not identical with the true immunity produced by inoculating the animals with the bacterial products of cholera.

2. Inoculated animals, notwithstanding their high degree of immunity against the living vibrio, are not immune to the toxines of the same vibrio. The blood of the inoculated guinea pig has no antitoxic properties

3. The blood of the carefully inoculated animals possesses in a high degree the property of conferring immunity, and, in a certain sense, theropeutic qualities.

4. The blood of convalescents from cholera has the same specific and curative properties as does that of inoculated guinea pigs. These properties first appear at the end of three weeks after patient is taken sick and entirely disappear three or four days later.

2. The cell reactions which find expression in phagocytosis play the most important role in the protection given by injections of bouillon, salt solution, etc.—*Zeit für Hygiene, etc.*, xvi., 2, 1894.

Queries and Answers.

We shall be glad, in this department, to respond to calls for information bearing on pharmacy or any of its allied topics, and cordially invite our friends to make use of this column.

When sending for the formula of an unusual, patented or proprietary compound, the query should be accompanied with information regarding the locality in which it is used, its uses, and reputed effect. When it can conveniently be done, a specimen of the label used on packages of the compound should also be sent.

Elixir of Gentian and Iron.—P. T. writes: "I have trouble in preparing a stable elixir of gentian and iron with the published formulas. Will you kindly print a formula that can be depended upon to produce a satisfactory article?"

We give below a formula which is used with very satisfactory results by a subscriber:

I.

Tincture iron citro-chloride	1,040 minims
Simple elixir enough to make	8 fl. ounces

Mix.

II.

Fluid extract gentian	4 drachms
Simple elixir, enough to make	8 fl. ounces

Mix.

The above solutions are mixed in equal proportions to produce a finished elixir of gentian and iron.

Patent Bottle Filler.—C. M. W. says that the patent bottle filler asked for by C. H. M. in the March 22 issue can be procured from the makers, Chas. E. Hires & Co., Philadelphia, or through any jobber.

Sarsaparilla Syrup C. M. W.—This is best made as follows: First prepare a "Sarsaparilla Essence" composed of:

Oil of wintergreen	2 fluid drachms
Oil of sassafras	2 fluid drachms
Alcohol	8 fluid ounces

Then prepare a syrup containing

Sarsaparilla essence	2 fluid drachms
Comp. fluid extract sarsaparilla	2 fluid drachms
Solution caramel	3 fluid drachms
Simple syrup	2 pints
Tincture quillaja	2 fluid drachms

Mix.

Oil of Muguet.—I. W., Jr., writes: "Will you kindly tell me what oil of muguet is?"

Warrick Frères of this city say that oil of muguet is a definite chemical compound used by perfumers for blending purposes. According to others it is a mixture of oil of linaloe and terpineol.

Oil of Linaloe J. W., Jr.—This is the odorous principle of the Mexican Lign-aloe, *Bussera Delpechiana*, though the New Mexican Pharmacopœia also gives *Amyris Linaloe* as the source of the oil. The oil is described as an oxygenated body having the formula $2(C_{10}H_8)\ 5H_2O$, this formula answering to that of a hydrate of terebenthene or of an isomer. The odor of the oil is likened by Poisson ("Odorographia," page 290) to a mixture of lemon and jasmin, and by others it is thought to resemble bergamot. The odoriferous constituent of oil of Mexican Lign-aloe was discovered by Semmler (*Ber. d. D. Chem Ges*, 1891, xxiv., p 207—"Odorographia," p. 290) and termed *Linalool*. This has recently been isolated by Schimmel & Co. who find that it is the principal constituent of the oil, and is the sole bearer of the latter which is so valued in perfumery. It is described as an almost colorless liquid, very soluble in alcohol of sp. gr. 0.878 at 15° C.

Sawyer says the acetic ester of linalool constitutes about 40 per cent. of oil of bergamot, so it is not surprising that the odor of linaloe has been thought to resemble that of bergamot.

Sachet Powders. I. W., Jr.—We can only give you a short selection from the large number of varying formulas scattered through different works:

HELIOTROPE SACHET.

Powdered orris	2,000 parts
Powdered rosa centifolia	1,000 parts
Powdered tonka bean	500 parts
Cut vanilla bean	250 parts
Powdered musk	10 parts
Essential oil of almonds	1 part

Pound the musk and vanilla bean together and add the rest. Pass through a sieve of fairly wide mesh and bottle. This affords an excellent imitation of heliotrope.

LAVENDER SACHET.

[PIESSE.]

Powdered lavender	75 parts
Powdered benzoin	20 parts
Oil of lavender, Mitcham	1 part.

Mix.

PATCHOULY.

Patchouly herb, ground	8 ounces
Lavender flowers, English	3 ounces
Powdered orris	2 ounces
Powdered cloves	1 ounce
Oil of bergamot	1 drachm
Essence ambergris	½ drachm
Essence musk	½ drachm
Otto of patchouly	2 drops

NEW MOWN HAY.

Orris, in coarse powder	1½ pounds
Rosa centifolia, ground	1½ pounds
Orange flowers, ground	¾ pound
Benzoin, in coarse powder	¼ pound
Tonka beans, ground	¾ pound
Ambrette, ground	¾ pound
Oil of verbena	1½ drachm
Essential oil of almonds	1½ drachm

MUSK.

Otto of rose	1 drop
Ammonium carbonate	3 grains
Musk	9 grains
Powdered orris	8 ounces

Mix.

St. John Long's Liniment. D. G. S.—This is composed of

Yolk of egg	One	
Essence of lemon	30	minims
Acetic acid	1	fl. ounce
Oil of turpentine	1½	fl. ounces
Rose water	3	fl ounces

The yolk of egg is first rubbed down with the water and acetic acid, then placed in a bottle with the turpentine and shaken together until emulsified; lastly, the lemon is added.

Tincture of Alkanet. D. G. S.—This tincture is made by macerating 20 parts of alkanet in sufficient alcohol to make 100 parts for seven days and filtering. It is used as a coloring agent.

Bismuth Hair Dye. R. McR.—A modification of the formula referred to is found to give better results. We give the modified formula below:

	Parts.
Tartaric acid	19
Bismuth nitrate	60
Ammonia water 0.88 sp. gr.	30
Glycerin	160
Sodium hyposulphite	13
Water sufficient to make	500

Dissolve the acid in 26 parts of water and dissolve the bismuth in this solution; add an excess of water to precipitate the bismuth, collect the precipitate and dissolve in the ammonia water, and then add the glycerin, the sodium hyposulphite and enough water to make 500 parts.

Carmine Red Coloring.—A. C. W. asks: "What can I use to color dilute alcohol preparations a carmine red that will not be affected by acids, alkalies or chlorine gas."

A few drops of liquid cochineal will usually be found to answer, though few of the vegetable colors will stand prolonged treatment with chlorine without fading.

Liquid cochineal is prepared as follows:

Cochineal in fine silver grains	1 ounce,
Potassium carbonate	1 ounce.
Aluminum and potassium sulphate	1 ounce.
Citric acid	½ ounce,
Water, a sufficient quantity.	

Boil the cochineal (bruised) in a glass or copper vessel of suitable capacity in 8 fluid ounces of water, to which the potassium carbonate has been added. Mix loosely the alum and citric acid in powder and add gradually to the boiling liquid, and continue to boil until effervescence has entirely ceased. While still hot filter and wash the filter with hot water to make the whole measure 12 fluid ounces.

The aniline dyes will be found useful, many of the more recently introduced reds and shades of that color being well adapted for the purpose indicated; tincture of cudbear may also be mentioned.

Liquid Bluing. C. T. D.—The best liquid washing blue is made by dissolving indigo carmine in water containing a trace of gum arabic. The proportions of each are as follows:

Gum arabic	6 drams
Indigo carmine	1½ ounces
Water, enough to make	16 fluid ounces.

A cheaper article may be made by dissolving one ounce of a mixture composed of equal parts of Prussian blue and oxalic acid in one pint of water.

Red and Black Inks W. J. B.—See DRUGGIST AND RECORD, March 22, 1894, page 146. The formulas there given are excellent.

Lydia Pinkham's Compound.—W. J. B. writes: "In answer to J. R. W. (DRUGGIST AND RECORD, March 8) I would say that Lydia Pinkham's compound is understood to be an infusion or decoction of *Gnaphalium polyceophalum* a plant known in common with several others as Life Everlasting."

Soluble Extract of Ginger. A. N.—The following formula will be found excellent for the purpose:

Jamaica ginger (ground)	2 pounds
Pumice stone (powdered)	2 ounces
Lime (slaked)	2 ounces
Dilute alcohol, sufficient to make	4 pints

Rub the ginger with the pumice stone and lime, thoroughly mixed; then moisten with dilute alcohol until perfectly saturated; place the mixture in a narrow percolator, being careful not to use any force in packing, simply so that the menstruum will go through uniformly; lastly, add dilute alcohol and proceed until 4 pints of the percolate are obtained; allow the liquid to stand 24 hours and filter if necessary.

Essence of Sarsaparilla. A. N.—An extract or essence of sarsaparilla suitable for preparing syrup of sarsaparilla for the soda fountain can be made as follows:

Compound fld. extract sarsaparilla	2 drachms
Caramel solution	3 drachms
Oil of wintergreen	2 drachms
Oil of sassafras	2 drachms
Alcohol	8 fl ounces

Dissolve the oils in the alcohol and add the extract of sarsaparilla and solution of burnt sugar. One ounce of an extract prepared as above will be found sufficient for two pints of syrup.

Glycerin Cosmetic Jelly. T. B. An excellent emollient, for use against chapped hands and face, is said to be preparable as follows: Two drams of gelatin are soaked in 6 fluid ounces of rose water, dissolved in the water-bath, and admixed, after cooling and while the mass is still liquid, with 5 drams of albumen. On heating the mixture again, it becomes perfectly clear—from the precipitation of

the albumen. It is then admixed with a solution of 12 grains of salicylic acid in 5 fluid ounces of glycerin. The liquid, well mixed and filtered through a hot-water funnel, is finally poured into wide-mouthed bottles, where it solidifies.

Correspondence.

Legislation in New York.

Editor AMERICAN DRUGGIST:

You are doing good work in keeping us posted and in fighting obnoxious legislation. Every department of trade is annoyed by useless and obnoxious legislation, and pharmacists should work together to defeat all such legislation. There are too many smart Alecks in the legislature.

OLD PHARMACIST.

BUFFALO.

Piperazine Prices.

Editor AMERICAN DRUGGIST:

Some misunderstanding has arisen among our customers and the drug trade through an oversight on your part in inserting in your issue of March 22 an advertisement of ours which should have been replaced by new matter. May we ask you to be good enough to advise your readers of the change in the price of Piperazine-Bayer which took place on February 24? Piperazine-Bayer is now sold at the uniform price of $1.50 for tubes containing ten tablets and of $4.25 for vials holding one ounce. By giving this communication a prominent position in your valued journal you will confer a favor. W. H. SCHIEFFELIN & CO.

The Proprietor's Side Of It!

Editor AMERICAN DRUGGIST:

Everyone calling on the drug trade and reading the drug journals is familiar with the cry of the retail druggists against the sins of the proprietor in selling his goods through the drygoods and department stores. This cry is rather that of a spoiled child than that of a shrewd business man.

I have come to this conclusion from my own very considerable experience as a manufacturer of proprietary articles. I have gone to the retail druggist, shown him my preparations, asked him to distribute advertising matter for me, and shown him that I was advertising to the consumer independent of his aid, and that if he would give me his aid to that extent he would be able to build up a lucrative business without any outlay on his part. The advertising which I wanted him to use was neat and attractive and also useful, as I furnished counterpads of wrappers printed in such a manner that he could use them in wrapping goods without any offence to the customers. Almost uniformly the druggist has declined to use this advertising matter, saying that he would not have anything to do with the preparation, however good it might be, until he had calls for it.

On the other hand, having been discouraged by the attitude of the drug trade, I have gone to the drygoods and department stores, have been treated with uniform courtesy and have almost invariably received their co-operation. The drygoods men, being shrewd business people, saw an opportunity here to add to their profits and build up trade without any expense to themselves. In the drug trade I was met with scant courtesy at best, and in some places with positive rudeness, although I thought the proposition I made was as much to their interest as my own.

Now, after the drygoods people and my advertising have built up a large demand for my goods I hear the druggist making a most vigorous protest, saying that my goods should not have been placed through the drygoods people but through the drug trade, that my methods were irregular, etc., etc. Are not the druggists themselves responsible for the course I pursue? I think they are. PROPRIETOR.

Bibliography.

THE NATIONAL DISPENSATORY. Containing the Natural History, Chemistry, Pharmacy, Actions and Uses of Medicines, Including Those Recognized in the Pharmacopœias of the United States, Great Britain and Germany. With Numerous References to the French Codex. By Alfred Stillé, M.D., LL.D., Professor Emeritus of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania; John M. Maisch, Ph.M., Phar. D., late Professor of Materia Medica and Botany in Philadelphia College of Pharmacy, Secretary of the American Pharmaceutical Association; Charles Caspari, Jr., Ph.G., Professor of Pharmacy in the Maryland College of Pharmacy, Baltimore, and Henry C. C. Maisch, Ph. G., Ph. D. New (Fifth) Edition; Thoroughly revised, according to the New United States Pharmacopœia (Seventh Decennial Revision, 1894). In one Imperial Octavo Volume of 1,90 0 Pages, with 320 Engravings. Cloth, $7.25; Leather, $8. With Ready Reference, Thumb Letter Index, Cloth, $7.75; Leather, $8.50.

THE DISPENSATORY OF THE UNITED STATES OF AMERICA. By Dr. Geo. B. Wood and Dr. Franklin Bache. Seventh edition. Thoroughly revised and largely rewritten, with illustrations. By H. C. Wood, M.D. LL.D., Professor of Materia Medica and Therapeutics and of Diseases of the Nervous System in the University of Pennsylvania; President of the Convention of 1890 for the Revision of the Pharmacopœia of the United States; member of the National Academy of Science. Joseph P Remington, Ph.M., F.C.S., Professor of Theory and Practice of Pharmacy in the Philadelphia College of Pharmacy; first Vice-Chairman of the Committee of Revision and Publication of the Pharmacopœia of the United States of America; and Samuel P. Sadtler, Ph.D., F.C.S., Professor of Chemistry in the Philadelphia College of Pharmacy. Philadelphia: J. B. Lippincott Company, 1894. Royal 8vo, pp., 1950; Cloth, $7; Leather, $8; with Patent Index, 50 cents extra.

In the many critical and laudatory notices of the fifth edition of the National Dispensatory which have appeared in the medical and pharmaceutical prints, following upon its early appearance after the new Pharmacopœia, one note has been sounded distinct above the rest: and that is one of praise to the publishers for the celerity which they have displayed in revising the work and placing its vast fund of necessary information before the medical and pharmaceutical professions.

Although the work has been brought fully into line with the new Pharmacopœia, it is not apparent that sufficient effort has been exerted in other directions to bring the book up to our present state of knowledge. Much of the recent work in pharmaceutical research seems to have been overlooked and a hesitancy about giving credit to new workers in the field of practical pharmacy is noticeable.

Being largely used by working pharmacists both at the working bench and the dispensing counter, a work like the National Dispensatory should be practical in its scope, and contain, in addition to its valuable notes on the history and descriptions of drugs and chemicals, a summary of the principles which should guide the dispenser in compounding preparations that are difficult to present in agreeable form—of which elixirs and emulsions of the newer hypnotics and antipyretics may be named as examples.

That something has been sacrificed to haste in compiling the volume is shown in the succeeding paragraphs, which constitute a cursory but fairly comprehensive summary of its more important features.

Beginning with the article on Abrus we find some additions to the constituents. The part on medicinal action and uses is rewritten; but reference to common sophistications and adulterations of the drug are wanting. The numerous products which have been proposed from time to time as substitutes for Acacia are not given and the article on this subject remains as in the previous editions.

The article on Acetanilid is new. Under Acidum Arseniosum are given two new illustrations of improved reduction tubes. In the article on Tannin Prof. H. Trimble's recent work on "The Tannins" has been consulted. Von Schröder's modification of Lowenthal's method of estimation of tannin is given.

The part on the constituents of Aconitum has been in part rewritten. The investigations of Ehrenberg and Purfürst (1892) and those of Dunstan and Harrison (1893) are mentioned. An additional illustration is given of the leaf of aconite. The part on Aconitine contains the most recent work of Dunstan and Carr (1893).

The article on Adonis is new but does not contain a record of the isolation of a crystalline principle by Merck (*Ber.*, 1892).

The articles on materia medica and botany from this point on have apparently not been so thoroughly revised. This is in all probability due to the serious nature of the illness of the late Prof. John M. Maisch, as he had no doubt begun on the complete revision of the work, as its beginning amply testifies.

The article on Aloes remains without apparent alteration. This may likewise be said of the following, to the literature of which additions or corrections have been made during the past few years: Ambergris (Beauregard and Jourdain, 1892); Angelica root (phelandrine in oil of root and seeds by Schimmel & Co., 1891); Angustura (Alkaloids by Beckurts and Nehring, 1891); Areca (alkaloids by Jahns in *Berichte* 1891); Arnica (Borner on the constituents *Apotheker Zeitung*, 1892); Asafœtida (Semmler published an exhaustive paper on the oil in *Archiv.*, 1891); Atropine nor Belladonna; Benzoin (work of Ludy in *Archiv.*); Berberis (researches upon berberine and its derivatives by Prof. Schmidt and others, *Archiv*, 1890); Caffeine and Theine (labors of Dunstan and Shepheard, *Archiv.*, 1893); Cannabis indica (an alkaloid by H. F. Smith, resembling the cannabinine of Siebold and Bradbury, *Am. J. Pharm.*, 1891); Chelidonium, (alkaloids by G. Konig, *Chem. Centralb.*, 1891); Coca (alkaloids by Liebermann, Hesse and others, *Phar. Record*, vol. xv., No. 3); Conium (a new crystalline base by Merck and further examined by Adam and Ladenburg, *Berichte*, 1891); Fabiana (negative results of the presence of an alkaloid in this plant by Landenbeck, confirming the results of Niviére and Liotard); Frangula (investigations of Thorpe and Miller on frangulin, *Jour. Chem. Soc.*, 1891); Gelsemium (bases by Cushing and gelseminine by Spiegel, 1893); Grindelia robusta (the active principles by Schneegaus); Hyoscyamus (alkaloidal value of annual and biennial henbanes by A. W. Gerrard, *Ph. J. Tr.*, 1890); Myristica (paper by Warburg on the useful varieties); Opium (no reference is made to the new alkaloid xanthaline discovered by T. and H. Smith & Co.; also tritopine by Kander); Pareria brava (examination by Ringer and Brooke for distinguishing the true from false, *Ph. J. Tr.*, 1892); Rhamnus Purshiana (isolation of the active principle cascarine by Leprince, *Compt. rend.*, 1892); Sabadilla (examination of fat and essential oil of sabadilla seeds by E. Opitz; also two new

alkaloids, sabadine and sabadanine, by Merck, 1891); Sanguinaria (alkaloids of the root by Konig, *Chem. Centralb.*, 1891); Sarsaparilla (isolation and examination of glucosidal constituents of sarsaparilla by W. v. Schultz, *B. M. J.*, 1892); Strophanthus (examination and means of identification of the Strophanthus seeds of commerce by E. M. Holmes, *Ph. J. Tr.*, 1893); Strychnine (constitution by Tafel, *Annalen*, 1891); Thea (amount of theine in tea by Paul and Cownley, *Ph. J. Tr.*, 1890); Urtica (crystalline alkaloid obtained by Oddi and Lomonaco, *B. M. J.*, 1892); Valerian (isolation of two principles from Valerian as recorded by Waliszewski, *L'Un. Pharm*, 1891); Veratrum album (examination of the alkaloids by Salzberger, *Archiv*, 1890).

Under Digitalis, Kiliani's investigations (1892) are given. Under Podophyllum, investigations of Kursten (1891) on the active principle (*Achiv.*, 1891) are given.

On the whole the work is to be commended particularly when the fact is taken into consideration that Prof. Maisch's illness and death occurred just at the time when the work of revision had been partly completed.

The encyclopedic character of the Dispensatories makes them indispensable to both the medical and pharmaceutical professions. Of the two works the United States Dispensatory seems to find greatest favor with pharmacists, though a preference for the work is also manifested by a considerable number of medical men who seem to think it contains fuller mention of the unofficial medicinal products, as well as of the substances that might properly by termed rarities of materia medica. However this may be, the United States Dispensatory is a favorite reference book with pharmacists, some using it to the exclusion of any other commentary on the Pharmacopœia, and in many instances in preference to the Pharmacopœia itself. A new edition revised in accordance with the Pharmacopœia has been anxiously looked for, and now that it has appeared its reception has been all that its publishers could desire.

That the work is fairly well abreast of the recent progress in pharmacognosy is shown further on.

The article on Tannin refers to work of J. N. Spence for distinguishing between tannic and gallic acids (*Jour. Soc Chem. Ind.*, 1891). Reference is also made to recent methods suggested for estimating tannin. The article on Aconite, while comparatively recent, including the works of Dunstan (1891-92), does not refer to the labors of Dunstan and Harrison (Feb., 1893), who showed that napelline has the same composition as aconitine and is termed by them iso-aconitine. This alkaloid is entirely different from the mixtures of amorphous alkaloids, called by the earlier investigators "napelline." Nor are the investigations of Dunstan and Carr on the composition of some commercial specimens of aconitine referred to. These results indicated that nothing but pure aconitine, possessing characters described by them, should be used in medicine (*Ph. J. Tr.* [3], xxii., 55).

The recent work of Merck in isolating the principle adonit from Adonis vernalis is given. Likewise the discovery of an alkaloid in Nettle by Oddi and Lomonaco. The subject of Opium is partly rewritten. The color reactions of the more important opium bases, from Allen's "Commercial Organic Analysis," is added. No reference is made to the new alkaloid xanthalin, discovered in 1893.

In considering Curaçao aloes mention is made of the work of E. M. Holmes in 1890, that this aloes is obtained from Aloe chinensis (Baker), and the fact is also recorded that it was probably mixed with the juice from the leaves of Aloe spicata and Aloe soccotrina. This has been disputed by S. C. Henriquez, a manufacturer of Aloes at Curaçao, who sent specimens of his preparations to the Pharmaceutical Societies' Museum together with some interesting information concerning the process of manufacture (*Ph. J. Tr.*, 1892.)

In the article treating of *Arnica montana* we do not find any reference to the recent work on the constituents by Börner (*Apoth. Zeit.*, 1892). Reference is made to the examination of *Aspidium athamanticum* by R. Kürsten (1891). On the origin of Ambergris the work of Jourdain (*Compt. rend.* 1892), and Beauregard (*Jour. de Phar*, 1892) are given. Daccomo and Tomasi examined the ferment in *Anagallis arvensis*. This is recorded. The work on Solanaceous alkaloids is not up to date. The importance in distinguishing the leaves of the Salanaceæ from each other is observed in the newer illustrations showing the surface characters. No reference is made to extracts prepared from animal tissues. Nor to the *Panox gums*, one of which, *P. Murrayi*, is suggested as forming a suitable substitute for gum arabic.

The recent work of T. Ludy on the origin of benzoin and the constituents of Sumatra benzoin are not recorded. Nor the work of Masson, who extracted two principles, bryonin and bryoresin, from Bryony. Nor to the labors of A. Mankowsky, who stated (1890) that, while bryonin is inert, bryonidin is poisonous only in large doses (*Ph. J. Tr.*, 1890).

The work of Dunstan and Shepheard is given in the chemical identity of caffeine and theine. In considering caffeine citrate the United States Dispensatory says that this is not regarded by chemists as a chemical salt but as a mechanical mixture of the two substances composing it. No reference is made to the results of Schmidt and Gaze, who made examinations upon the action of organic acids upon caffeine. They did obtain a salt of the composition $C_8H_{10}N_4O_2C_6H_8O_7$, which differed considerably from a mixture of caffeine and citric acid in that it does not lose weight on drying at 100° nor does a solution of the salt in chloroform and alcohol redden litmus paper.

Under Cannabis indica reference is made of the confirmation by M. F. Smith of the alkaloid described by Siebold and Bradbury. Likewise under Capsicum the investigation of the part of *C. annuum* by Pabst are given. Under Chelidonium the work of König on the alkaloids. Under Cheniaphila an examination by J. C. Peacock. Under artificial Caoutchouc we find no reference to the synthesis of caoutchouc by Tilden (*Chem. News*, 1892). Nor reference to the discovery of carpaine in the leaves of *Carica Papaya* by Greshoff. Nor the results of v. Oefele, who regards Carpaine as the only substitute for digitalis for use hypodermically. This has been further confirmed by Van Ryn (*Archiv.*, 1893).

The article on Chloroform has a number of additions. The article on Cinchona has been rewritten. Under Cinnamon the illustrations have been moved to the test on microscopical structure. The recent works of Hesse and others on the chemistry of coca leaves has not been given. The work on Conium is quite recent. An illustration of Crocus in a coarsely powdered condition is given. The recent work of E. M. Holmes (*Ph. J. Tr.*, 1892) on the examination of spurious cubebs is not given. No reference is made to the labors of Leprince, who discovered a new principle in Rhamnus Purshiana, which he regards as the active constituent of the plant and for which he proposed the name cascarine (*Comp. rend.*, 1892). Nor is there reference to the fact that Phipson regards this as identical with the rhamnoxanthin which he extracted from Rhamnus Frangula.

There is no reference to the labors of H. Trimble on the tannin of *Castanea vesca* (*Proc. Frank. Ins.*, 1892). Reference is made to the labors of Plugge on *Cerbera odollam* (*Archiv.*, 1893). Champacol is referred to (*Merck's Bull.*, 1893). The most recent chemical investigations of König and Tietz on Sanguinaria are not given (*Archiv.*, 1893). Nor is there any mention of the recent work of Weber (*Archiv.*, 1892) on the oil of cinnamon, which have been further confirmed by Schimmel. No reference to Citrene, being the name under which the terpenes separated from oil of lemon in the production of terpeneless oil is said to be invoiced, and according to Schimmel will form a suitable adulteration for oil of lemon.

In quoting Dr. Rusby's statement concerning different varieties of cocoa two opinions are quoted which are contradictory. While both of these were uttered by Dr. Rusby it would have been wiser to have quoted only the last statement made, which was in the nature of a correction of the earlier statement based upon a more thorough knowledge of the subject gained by subsequent investigations.

The results of the examination of salts of codeine by Göhlich are not given (*Apoth. Zeit.*, 1893). While the quite recent investigations of *Corydalis cava* by Merck and *C. nobilis* by Birsman is given, mention is not made of the labors of Dobbie and Lauder (*Proc. Ch. Soc.*, 1893). The work of Partheil on cystisine and ulexine in *Cytisus Laburnum* and *Ulex Europœa* is given. The recent investigations by Kiliani on Digitalis are given. No reference is made to the discovery of a new alkaloid pseudohyoscyamine by Merck in *Duboisia myoporoides*. It is stated that it is not identical with any other solanaceous base (*Birschle*, 1892). Nor do we find reference to the work of Maiden on the Oleo-resin of *Canarium Muelleri*, together with some notes on Manilla Elemi. The exudation of *Canarium Muelleri* consists of a solution of an amorphous resin in a volatile oil. It possesses no particular affinities to manilla elemi. Ergot has been added to. Eupatorium contains the recent labors of Shamel. Under Grindelia robusta we observe no reference to Schneegan's work on the saponin (*Jour. d. Ph. Elass-Loth.*,) 1892.

Under Ipecacuanha there is no reference to the labors of C. C. Kellar in determining the emetine nor to the preparations of Ipecac free from emetine. There is no reference to the labors of Davies and Pearmain on Eucalyptus (*Pl. J. Tr.*, 1892). Nor is there a record of the labors of Post on Helenin (*Schimmel's Bes.*, 1892). Lappa has been added to.

Hefelmann's test for detecting the presence of Bombay mace or of turmeric in mace is given. No reference is made to the paper by T. Stephenson on Jambul (*Eugenia Jambolana*) *Pl. J. Tr.*, 1892). Nor is there reference to the investigations of Kwasnik on the chemical examination of the essential oil of *Lindera sericea* (*Archiv.*, 1892). Under the texicology of Male Fern, reference is made to the labors of Katayama and Kamoto. No reference is made to the labors of N. E. Brown on the plants yielding *maté*.

Reference is made to the investigations of Bertrand and Blanc on the recent

medical and chemical properties of the oil of *Melalenca vindifolia*. No reference is made to the labors of Shimoyamo and Ono on the ethereal oil of *Mosala Japoméa*.

On the subject of Nutmegs no reference is made to work of Marburg (paper read before the Berlin Pharmaceutical Society, 1892) in which he showed that *myristica argentea* comes next to *M. fragrans* and has the greatest possible future (*Ph. J. Trans.*, 1892, 12).

Under Sarsaparilla no reference is made to the extensive investigations of W. v. Schultz on the glucosidal constituents of sarsaparilla (*B. M. J.*, 1892, and PHARM. RECORD, Aug. 18, 1892). Wallach's recent examination of the oil of sage are given. Also Lyon's examination of Sambucus; Konig's examination of Sanguinaria, and the labors of Cripps on Sandalwood oil.

Article on Scammony is not written according to the investigations of Poleck (*Zts. d Allg. Oest. Apoth. Ver.*, 1892). Reference is made to labors of Villavecchia and Fabris who have recently examined, chemically, oil of Benne, although no mention is made of the tests applied by G. Ambühl for distinguishing this oil from other oils (*Schweiz Wochenschr. Pharm.*, 1892); nor of the examination of Sesamin by Tocher (*Phar. J. Tr.*, Feb., 1893).

In rewriting the article on Strophanthus no reference is made to the elaborate investigations of E. M. Holmes on examining the Strophanthus seeds of commerce (*Ph. J. Tr.*, April, 1893). Under Senega, Reuter's analysis is given. Under Sinapis nigra a number of microscopical illustrations are given. Sumbul has been added to.

Under Yew no reference is made to labors of F. J. M. Stuart Wortley who found that taxine is contained chiefly or entirely in the male plant (*Ph. J. Tr.*, 1892). An illustration of Veratrum viride is given.

The dispensatories are works of paramount usefulness to both physicians and pharmacists, and no pharmacist should undertake the conduct of a pharmacy without possessing at least one or the other of the two standard publications.

Distilled Water.

Some three years ago the New York Academy of Medicine induced the Board of Health to investigate the conditions of the supply of distilled water at the retail drug stores in this city.

The physicians claimed that when they ordered *distilled* water in prescriptions the druggists did not dispense distilled water. As a result of the investigations of the Board of Health it was found that by much the larger proportion of water purchased by retail pharmacists as distilled water contained notable quantities of impurities.

It was found that in many instances the manufacturing druggist did not have a separate still for the distillation of water, but merely condensed a portion of the waste steam from his power boiler, thus getting a very impure product. In one instance water bought from a concern not pharmacists, making a specialty of selling distilled water, proved impure.

If a druggist wants to get really pure water, therefore, the only absolutely safe plan seems to be to distill it himself.

This is the plan pursued by H. N. Fraser, the widely-known Fifth avenue pharmacist, who was recently re-elected treasurer of the New York College of Pharmacy.

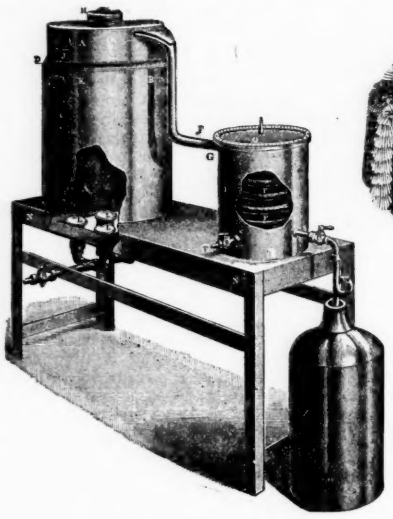
Mr. Zimmerman, who has charge of the analytical laboratory on the fourth floor of the Fifth avenue store, courteously showed the writer a new water still which they have recently put in.

This still which is illustrated herewith is one of the most practical and satisfactory, so Mr. Zimmerman says, that he has as yet had any experience with.

The still is constructed in the most simple and substantial manner in every detail. Among the features of special value are the burners for heating and the condenser. Mr. Zimmerman states that when once in operation, and it takes but a few minutes to get it going, the still will turn out a perfect stream of condensed water.

This is done, too, with a remarkably small consumption of gas and of water for cooling.

The still itself is made of copper, lined with tin, while the double, non-conducting



THE CURRAN WATER STILL.

jacket around the fire box insures the most economical utilization of the heat generated.

Aside from the purely pharmaceutical uses for distilled water there is a growing appreciation among the public of the necessity of using pure water for drinking, and distilled water is of course the purest possible form of the liquid.

The still is made by the Jas. Curran Mfg. Co., 512 and 514 West Thirty-sixth street, New York City, who will send more detailed descriptions if this journal is mentioned when writing them.

Bath Brushes and Civilization.

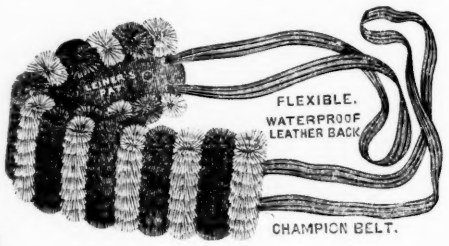
"Tell me the Number of Bath Brushes, used by any nation, and I will tell you its degree of Civilization."—PHILOSOPHER.

The friction brush is by no means of modern origin, being old enough to excite the envy of any of our Four Hundred. We find the cartigis (friction brush) mentioned in the glorious days of Rome as a requisite to the sleeping chamber and the bath of the patrician.

Later on it seems to have been among the lost arts, even to the times of that famous Duke of Argyle who, according to a popular tradition, was on one occasion in a very awkward predicament for the want of a flesh brush. But, as Rudyard Kipling says, "that is another story."

If you want that story write to M. Leiner, brush maker, Philadelphia, for it mentioning this journal and he will send it to you. Mr. Leiner has just gotten out some very interesting reading matter about some new brushes that he has recently placed on the market.

These brushes have the bristles twisted in wire, not drawn, and are therefore more durable, give better friction, are guaranteed both for wet and dry use, and sell quicker than any other make.



They have the distinction of being the only American made brushes that sell in England, the home of brushes, all over Canada and South America, etc. Surely they must have some merits not possessed by others.

The accompanying illustrations show two of these new brushes that are of special interest.

The first has a light wood, round body with black and white brush firmly attached to a long curved handle suitable for a bath brush.

The second consists of 15 rows of brushes mounted on a flexible leather water-proof back with strap handles.

The Martindale Herbarium.

At a meeting of the board of trustees of the Philadelphia College of Pharmacy, held April 3, 1894, Howard B. French, on behalf of himself and the Smith, Kline & French Co., who had jointly purchased this world-renowned herbarium, presented it to the college, with the request that it be retained intact as the "Martindale Herbarium."

The gift was accepted by the board of trustees, who felt that it was a great acquisition to the college, and they directed that engrossed resolutions, expressing the sense of the board for the generous gift, be presented to the donors and a copy of same be framed and placed in the library of the college.

The collection will be kept entirely distinct from that already owned by the college, and will be known as the "Martindale Herbarium, presented by Howard B French and the Smith, Kline & French Co."

Business.

Under this head will be conducted a department on the promotion of the business interests of the retail druggists in all their aspects, including that of advertising.

Our readers are invited to offer suggestions, to submit specimens of advertisements and to send inquiries on any points in which they are interested.

Written for the American Druggist and Pharmaceutical Record

How to Avoid the Accumulation of Dead Stock.

By Jno. W. Ballard,
Davenport, Iowa.

BUYING.

"An ounce of prevention is worth a pound of cure," an axiom as true in business as in medicine. How much to buy of this or that is one of the unsolved problems in everyday merchandising. The subject has racked the brain of the manufacturer, the importer, the jobber and the retailer. To be able to determine what the demand will be for any article, especially those together with the necessary insurance risk, buy the smaller quantity, for the dead stock item must not be forgotten even in staples.

SELLING.

In spite of all our caution the shrewdest buyer will get some goods that move slowly. If they are strictly holiday goods as soon as the season's sale has fairly closed carefully put them away where no one will see them until next year, they can then be displayed again as new. The second year should dispose of them. If you have any fears that they will not move make a low price on them, have them plainly marked and placed in your show window before the holidays. Many persons want to purchase something the price of which will correspond with their means and the price plainly marked on a showy article will often sell it. If the article is shopworn always accept the first reasonable offer for this reason—few people will make a present of soiled articles.

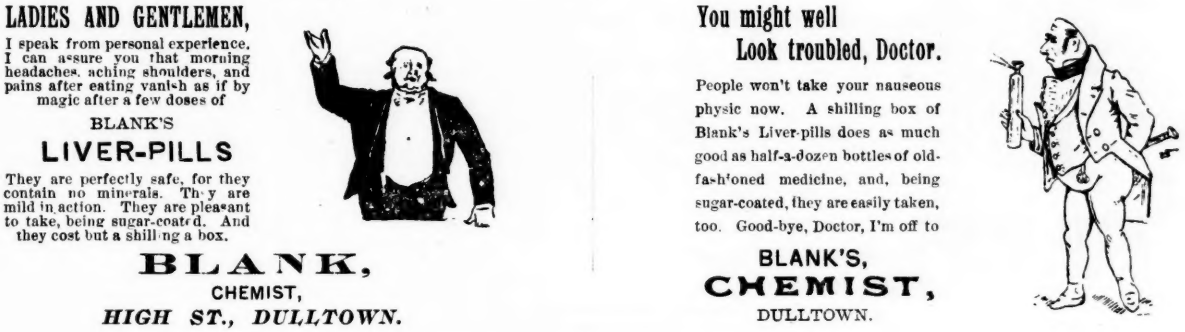
In many back rooms and cellars you will find a box full and running over with old wide-mouthed bottles in which chemicals have been purchased—an unsightly corner. Dead stock? Need not be. Buy a hundred pounds of chloride of lime for $3, fill up these now unsightly relics and put on them an atout, they will then be brought to your mind when an opportunity comes. In doing this you will come to some where you will have to draw the line. Do not recommend any so-called medicines that you are well aware are swindles. If they are called for sell them, otherwise set aside as you would counterfeit money to look at occasionally. Simply as a reminder to be more careful next time.

A JOKE ON A PHYSICIAN.

I will mention some other ways that have been resorted to, but without recommending them. In the early days of sugar-coated pills a quantity of various makes of cathartic pills were stored in a place which proved to be too damp for the coating as then made, and the result was several gross of spoiled pills. These were all made into one mass and rerolled, podophyllin added, so that each pill contained ⅛ grain, boxed and sold for anti-bilious pills. An actual joke on this combination was that a physician (?) got to using these pills, and when he moved away he wanted to get the recipe, so that he could get them made in his new home.

A KANSAS EXCHANGE.

A *dernier resort* may be learned from the following: During his business career


LADIES AND GENTLEMEN,
I speak from personal experience. I can assure you that morning headaches, aching shoulders, and pains after eating vanish as if by magic after a few doses of
BLANK'S
LIVER-PILLS
They are perfectly safe, for they contain no minerals. They are mild in action. They are pleasant to take, being sugar-coated. And they cost but a shilling a box.
BLANK,
CHEMIST,
HIGH ST., DULLTOWN.
You might well
Look troubled, Doctor.
People won't take your nauseous physic now. A shilling box of Blank's Liver-pills does as much good as half-a-dozen bottles of old-fashioned medicine, and, being sugar-coated, they are easily taken, too. Good-bye, Doctor, I'm off to
BLANK'S,
CHEMIST,
DULLTOWN.

Specimen Advertisements from the London *Chemist and Druggist.*

that are new and novel, is a most difficult thing to do. New remedies, toilet articles, and fancy novelties are constantly brought to our notice, and while some are almost stillborn yet many have a vigorous life and to keep up with the procession we must have them. Therefore, I claim that it is in keeping with good business principles to put in stock new things. Should they prove to be good sellers it is a good point made to be the first to have them, but in putting in new articles *always* observe this rule: Make your first purchase a small one. Better to use the telegraph and express to replenish your stock than to have unsalable stock left on hand. Buy with special care of the elixir of seven chlorides combined with three iodides, which the agent represents as being a remedy used by all leading surgeons in the East, and which Dr. Blank of your city thinks he will use and says he will send his prescriptions to you for it.

Very many staple articles are now sold on the "Rebate Plan," the quantity purchased at one time determining the price. In the purchase of these we may estimate that future sales may equal past sales, and this may be a safe rule to follow. If the rebate allowed does not *exceed* the interest on the investment to-

tractive label, and your bottles will soon be sold, and what is more you will find your customers will want the lime that is put up in bottles instead of the usual carton because it is always good.

At the close of the war a certain druggist purchased at auction a lot of hospital stores, and among them some 300 pounds of opodeldoc of a well-known manufacturer's make—pretty large stock for a retailer. He added to this some good oils and alcohol, put up in panel bottles as "Nerve and Bone Liniment," and the opodeldoc was soon sold and more made, and that store still has a good sale for the liniment that originated in this manner.

AVOID SWINDLES.

Patent medicines sometimes sell for a time rapidly, the advertising is stopped and the sale of them is at an end. Correspond at once with your wholesaler, there may be a demand for them somewhere in his territory, and to accommodate you or for a slight percentage you can exchange for other goods. Or they can be sold bottle by bottle when some one calls for "something good for a cough," or "Give me a bottle of blood purifier." Have one place in your store to put all remedies that you wish to close

a druggist had purchased three other stores and moved them, stock and fixtures, to his own, and as such stocks usually have plenty of chestnuts, be sure there was a collection when they were all together. During a dull season these were all sorted out, boxed up and a regular invoice made of them. In this place—and I presume it to be the same in other places—there are always trading people who want to sell you city lots, Western land, etc., etc.

This stock was always offered to these parties and served a good purpose to drive many of them away. But, strange to say, the truth of the saying "if you will keep a thing long enough somebody will want it" was illustrated in this case, for a party with a house lot for capital wanted just such a stock, and only wanted cash enough to ship it to Kansas.

It proved to be a good exchange to both parties—to the druggist, for he realized on stock to him "dead," and to the real estate dealer, for it settled the price of his lots, and his sales of them from that time on were rapid. The medicines were shipped to Kansas, but Providence showed its mercy to the people of that much troubled State by destroying them utterly with a *cyclone*. Therefore, all other means failing, try Kansas.

English Ideas of Advertising.

John Bull is a stolid, sturdy old gentleman, and when he goes in for advertising he carries his personality with him. Even when he is funny, or thinks he is his fun is apt to be somewhat ponderous. A liver is a serious thing—when you know you have it—but it is made a jest of by many contributors to a contest now being carried on in the London *Chemist and Druggist*, as to the best method of advertising Blank's Liver Pills. We publish some of the advertisements in this series on this and the preceding page though not exactly as examples to be followed by one desiring to increase his business.

Some Queer German Advertising.

The *Pharmaceutische Zeitung* of Berlin, which is issued twice each week, is one of the most valuable and widely circulated pharmaceutical journals of the world. Besides its valuable reading matter it contains a most interesting and heterogeneous mass of advertising. The advertisements are for the most part small and their display wretchedly inartistic.

A favorite method of attracting attention to an advertisement is the use of heavy-solid black borders such as would not be tolerated in an American journal of even the poorest class. These borders being sometimes a full quarter of an inch wide on an advertisement only 2 inches square.

It is not alone in the typographical display that the *Zeitung*, and in fact all the German papers, arouse the wonder of the American reader. In one issue, for instance, appear a number of advertisements of the various students' societies inviting the members to attend the "semester-schlusskneipe," or final beer drinking bout of the session. The term beer drinking-bout, however, while it conveys nearly the literal facts as regards the celebration, sounds rather coarser than the affair warrants. The Germans are quite public in their personal affairs also, and as a consequence we find in the *Zeitung* under the heading "Family News," advertisement, to this effect:

BORN—A daughter to Herr Apotheker Jänigen in Mülheim.

They not only welcome the coming but, as it were, speed the parting in public print, for we find mixed in with miscellaneous advertisements the following with appropriate turned rules. The original is two columns wide and three inches deep, and is, of course, in German, though as is universally the case in scientific publications the Roman and not the Gothic otters are used:

In Lieu of All Other Notification.

There departed early to-day at 6, after long and painful illness, my beloved wife, our true mother, stepmother and grandmother,

born Minna Wilm, Frau Drager,

in the 47th year of her life.

IN THE NAME OF THE MOURNING STAY-BEHINDS,
CARL WILM,
Corps Apothecary xv Army Corps,
Strassburg in Elssass, 27th January, 1894.

Cupid, too, as well as Hymen and Mors, furnishes his quota of advertisements, for we find the notice of an engagement alongside of the advertisement of a bacteriologist, while following it is an announcement that

A young widow, owner of an apotheke wishes to correspond with a competent Catholic pharmacist, with a view to matrimony later. Please address, if possible with photograph, Ph.5180, care *Pharmaceutische Zeitung*. Utmost discreetness.

That the young widow is not above the frailties of the flesh is indicated by the request for a photograph. But for the unfortunate difference in religious faith the widow need not have looked far to find a suitable match, for the very next advertisement following hers reads thus:

MARRIAGE.

For a well-to-do owner of an Apotheke, Evangelical, 30 years old, a suitable match is sought; means desired, but not absolutely required; no anonymous offers.

Imagine the sensation that such advertisements would create in an American class journal!

Though enterprising as to the reading matter, the *Zeitung* is singularly conservative in its advertising department, the bookkeeping being simplified at the expense of the appearance of the paper by the insertion of a serial number in each advertisement, as 5,384, 5,385, etc.

A Chinese Advertisement.

Very good ink, very fine, very old shop; grandfather, father, and myself, make this ink; fine and hard; picked out very fine and black, before and now. Sell very good ink. Prime cost is very dear. This ink is heavy; so is gold; no one can make like it; the others that make ink do it for money, and to cheat. I only make it good for a name. Plenty of gentlemen know my ink. My family never cheat. Always a good name. I make ink for the Emperor and all the mandarins round. All gentlemen must come to my shop and know my name.

UNGWANCHI LOCCE.

Quiz Box.

This series of questions will be continued each week. The answers to each series of questions will appear in the issue for the third week following their publication. All of our readers are invited to compete for the prizes named below.

Replies must be in our hands within two weeks after the appearance of the questions. The names of all making an average of 75 per cent. will be published each week.

Address Editor Quiz Box, 37 College place New York.

FIRST PRIZE.—A new Dispensatory, latest revised edition, will be awarded to the person who makes the highest general average of answers for the *entire* series of questions as published from March 22 to June 28, 1894.

SECOND PRIZE.—Copies of Harrop's "Monograph on Flavoring Extracts" will be awarded to the three persons who make the next highest general average for the entire series of questions.

THIRD PRIZE.—A copy of Heebner's Manual of Pharmacy and Pharmaceutical Chemistry will be awarded to the person sending in the most satisfactory replies to any three sets of questions, but who does not win either of the other prizes.

FOURTH PRIZE.—A copy of Lloyd's "Elixirs" will be awarded to every person who sends in an answer to *every one* of the questions published in the series, making an average of 66 per cent.

LISTEN TO ME!
If you would live to a ripe old age, and be healthy right along, remember this fact,
BLANK'S LIVER-PILLS
Are the very best remedy you can have for the many ailments arising from a disordered liver or impaired digestion. Try a box today. They cost but 1s., and
WILL SAVE YOU POUNDS.
SOLD ONLY BY
BLANK, CHEMIST,
DULLTOWN.
AFTER THE BAWL!
—if it's like this one—you'll be sure to have a headache. A dose or two of
BLANK'S LIVER-PILLS
Will quickly remove it.
You will remember, too, that the question "Is life worth living?" depends upon the liver. This troublesome organ is kept well up to its work by these pills.
Sold only by
JOHN BLANK,
CHEMIST,
DULLTOWN.

Specimen Advertisements from the London *Chemist and Druggist*.

THE results of the examination of the first series of answers shows that the Quix Box will prove of even greater value than the editor had hoped.

The benefits to be derived from participation in the contest are being appreciated by all classes of pharmacists and students. Some of the contestants are graduates in pharmacy, some are apprentices; some have grown gray in the service of Galen, while others are just taking up his burdens.

Among the students—for all earnest people are students however accomplished and learned they may be—are some of the fair sex, two of whom reached a grading of above seventy-five per cent. as is shown by the publication of their names in the following list.

Some of the class put at the head of their papers a statement that they have received no assistance in the compilation of their answers, either from books or from other sources. We presume that all could make this statement without reservation. It is only by so answering the questions that the greatest benefit will accrue.

It is unnecessary to use very heavy or expensive paper to write the answers on,

and it is not necessary to repeat thequestions with the answers. Have the paper used of uniform size, write on one side only, and *prepay the postage*. Many of the replies submitted weighed over the limit of 1 ounce, and the extra postage had to be paid at this office.

Nos. 5 and 11 of the first set of questions seeemed to cause the most trouble. While these questions are not, strictly speaking, practical ones, they are just such as are asked in junior college examinations, and their comprehension will aid toward more perfect understanding of much that is written concerning pharmacy.

The answers given here are necessarily very brief, and better or more complete answers might be given to some of the questions but for space limitations.

Answers to Questions 1 to 15.

(1) Physics is that part of science which treats of the results which flow from the molar and molecular conditions of matter.

(2) Chemistry is that branch of science which treats of matter in its atomic condition and the changes which it undergoes within the molecule.

(3) Botany treats of the vegetable kingdom, the structure of plants and their classification.

(4) Pharmacognosy treats of the natural origin, structure, and other means of identifying organic drugs.

(5) Pharmacology treats of the physiological action of medicinal substances.

(6) Pharmacy is the art of selecting, preparing, preserving, and dispensing medicinal substances.

(7) *a*. That branch of medical science which treats of the nature and properties of all substances used as medicines, or in the cure of diseases. *b*. All materials or substances used as medicine in the cure of diseases.

(8) Therapeutics is that branch of medical science which treats of the application of medicinal substances to the relief or cure of disease.

(9) Posology treats of the proper doses of medicines to be administered.

(10) Metrology is the study of weights and measures and of their relation to each other.

(11) Physical incompatibility is the dissociation of one or more of the constituents of a mixture without chemical action—*e.g.*, the addition of alcohol to mucilage of acacia, or of water to tincture of myrrh.

(12) Glycerin is obtained by decomposing fats by steam under pressure and as a by-product in the saponification of fats. It formula is $C_3H_8O_8$. General impurities are calcium and soda salts, sulphuric and hydrochloric acid.

(13) When ammonium carbonate is added to syrup of squills, carbon dioxide is liberated and some ammonium acetate formed.

(14.) Donovan's solution is a solution of arsenic and iodide of mercury.

Fowler's solution is a solution of arsenite of potash.

Clemen's solution is a solution of bromide of arsenic.

(15) Creosote is obtained by the destructive distillation of wood. Creosote in alcoholic solution will produce a greenish blue color with solution or tincture of iron; carbolic acid under like condition forms a brown solution. Carbolic acid will coagulate collodion; creosote will not.

Names of Students whose grade stood 75 on questions 1 to 15.

W. J. Adams, Manchester, Va.

E. O Bailey, Bloomington, Ill. James Banks, Mifflintown, Pa. H. J. Barber, Alton, Ontario, Canada. Wm. L Becker, Dubuque, Iowa. Heywood Boone, Clinton, Ky. Brenneman, Harrisonburg, Va. John W Brewer, Lake Preston, S. D. Roscoe J. Brown, Camden, N. J. W. E Bruce, Boston, Mass.

Miss Maude Florence Cain, Lancaster, Pa. Andrew Campbell, Williamsport, Pa. Lester Carde, Woonsocket, R. I. Henry E. Culbert, Newark, N. J. Chas. S. Clark, Shamokin, Pa. Chas. S. Cogley, Lowell, Mass. W. S. Collin, Mitchell, So. Dak. W. P. Craig, Indianola, Miss.

A. P. Davis. Redwood Falls, Minn. J. C. Dague, Fredericktown, Ohio. T. J. Derryberry, Centreville, Tenn. F. L. Dolan, Freeman, Mo.

Louis Fickler, New York City.

John J. Gregan, Warren, Mass William E. Gokay, Bennington, Vermont. Max A. Goltz, Winona, Minn.

L. Harding, Fergus Falls, Minn Frank Hartmann, Middletown, Conn. H. B. Harrop, Columbus, O. Frank L. Harwood, Warren, Mass. Walter Hegeman, Rhinebeck, N. Y. H. Heinzel, West Superior, Wis. F. G. Hill, New York City. Seymour, Hull, Hoosick Falls, N. Y. G. C. Hodges, Utica, N. Y. Chas. W. Hyde, Sharon, Pa.

Wm. L. Knuth, Springfield, Ohio. F. W. Krehbiel, Dayton, Ohio.

J. W. Latcher, Edinburgh, Saratoga Co., N. Y. A. M. Leine, Honesdale, Pa. C. W. Linchy, Lewisburg, Pa. M. D. Lingler, Philadelphia, Pa. Jno. Lohmann, Jr., Edwardsville, Pa. Nicholas N. Lawery, Schenectady, N. Y.

C. J. McCloskey, Jersey City, N. J. John F. Marr, Chillicothe, Ohio. F. H. Mayo, Mulhall, Pa. T. L. Mills, Boston, Mass. Arthur Mouri, Houghton, Mich. Thomas J. Murphy, East Bradley, Pa. John R. Murray, Centreville. Tenn.

W. B. Nethery, Toronto Junction, Ont. Ralph L. Nye, Skowhegan, Me. John T. Ogle, New York City.

Edward L. Page, Lancaster, Pa. P. H. Peters, Henderson, Mich J. H. Pratt, Birmingham, Ala.

T. I. Quirin, Santa Clara, Cal.

A. V. Rand, Wolfville, N. S. M. E. Read, Wauseon, Ohio. Paul F. A. Rudinek, Chicago, Ill.

C. D. Sauvinet, New Orleans, La. Clinton Sellers, Kencordino, Ontario. Wm. E. H. Schneider, New York City. Edgar B. Scott, Norfolk, Va. J. McDonald Scott, Chicago, Ill. William W. Scott, Highland Falls, N. Y. W. A. Sickel, Sewn Shoe, Pa L. W. Simonds, Providence, R. I. Alber Z. Smith, Clarksburg, W. Va. Clarence D. Snavely, Lebanon, Pa. Moses W. Somers, Boston, Mass. A. W. Walter Spingler, Toronto, Ont. Dan G. Sullivan, Holyoke, Mass. Walker L. Stephens, Philadelphia.

Lou Taylor, Greenfell, N. W. T. Howard B. Thomas, Syracuse, N. Y. J. W. Thomas, Jr., Norfolk, Va. Walter A. Tichenor, Brooklyn. Miss Edith Tompkins. Jasper, Fla.

W. H. Van Strander, Winsted, Conn. Chas. G. Vernon, Florida, N. Y.

M. D. Martin, Redwood Falls, Minn.

Bertie Ward, Orange, N. J. Miss Emma A. Wiggin, Exeter, N. H. Wood Wiles, Bloomington, Ind. John S. Wilson, Philadelphia, Pa. H. A. Woodward, Plainfield, N. J.

Questions; Fourth Series.

46. Give the six distinctive organs of a complete, perfect flower?

47. What is the difference between a regular and a symmetrical flower?

48. What is the difference between an incomplete and an imperfect flower?

49. What is a sesslie stamen?

50. What is meant by monandrous? and what by a polyandrous flower?

51. What is pollen, and what is its function?

52. What is a style?

53. What is a stigma?

54. What is meant by monogynous, and what by hexagynous?

55. What is meant by a gymospermous pistil?

56. What parts of plants are generally used in medicine?

57. To what are the medicinal virtues of plants generally due?

58. Describe the difference between the root and the stem of a plant?

59. Licorice: (*a*) Where is it found? (*b*) What part is used? (*c*) What are its medicinal properties and officinal preparations?

60. Give five saline aperients with their doses.

Death of Brown-Sequard.

Charles Édouard Brown-Séquard, the distinguished French physiologist and *savant*, died at Paris on April 2. He was born on the island of Mauritius April 8, 1817. His father was a sea captain from Philadelphia, who married a French lady named Séquard. The son was sent to Paris in 1838 to complete his medical studies and received his degree in 1840.

From 1864 to 1869 Brown-Séquard occupied the chair of Physiology and Pathology of the Nervous System in Harvard College. From 1869to 1871 he filled a professorship in the School of Medicine of Paris. In 1873 he removed to New York, but he returned to Paris in 1878.

Better than a Discount.

Williams, Davis, Brooks & Co., in their illustrated advertisement occupying a half page in this issue, call attention to an exceptional offer which they are now making with a view of interesiing the retail trade in Dabrooks' Perfumes. This is the giving away of one dozen handsome lithographed cards in colors with each order of Dabrooks' Perfumes to the amount of $12. Each card contains three bottles of perfume and is equivalent to a 25-per cent discount on the purchase required. Why not send a trial order.

Non-Secret.

Attention is called to the advertisement of Frederick Stearns & Co. on page 12, Retailers who wish to add a select line of non-secrets to replace some of the expensive goods of the patent medicine dealers should lose no time in writing to Frederick Stearns & Co., Detroit, Mich., for a catalogue and price list.

How to Advertise.

Have you something to sell? If so you should advertise it and if you are going to spend money in advertising you should be sure to get your money's worth. Nothing is so difficult to determine the value of as newspaper advertising space. In nothing does the price depend so much upon the purchaser. An expert can get better returns with half the expenditure than can one not an expert. He saves you money. His services cost you nothing. If you have anything to advertise, especially to the public write to A. R. Elliott, 37 College Place, about it. He is an expert maker and placer of advertising.

Elegant Pharmacy.

As vehicles for the palatable administration of powdered drugs, the Konseals of J. M. Grosvenor & Co., 103 Milk street, Boston, present many advantages over the pill and capsule. The Konseal is an improved modification of the French cachet, and, like it, is made of rice flour and water. The Konseals are prepared in six sizes with capacities varying from one to eighteen and one-half grains (quinine or salicylic acid). The makers refer to them as being convenient in form, absolutely soluble, elastic, tasteless, perfectly digestible and capable of remaining unimpaired by climatic changes for years.

SHALL WE ORGANIZE UNDER THE "LEAGUE PLAN."

Even retail druggists in the New England States should carefully read the following and be prepared to take immediate action.

If the retail fraternity of this country ever expect to better their condition, which, it seems to us, is fast assuming a deplorable one, it is high time they immediately organize under the "League Plan."

We do not mean during the coming year, neither at convenience and leisure any time this summer, but this present month of April before the annual meeting in May is the proper time. This opportunity with all its accruing benefits has constantly been offered you for more than a year past, and many sections that have fully realized the benefits to be derived and perfected their organizations long ago will not always have patience to wait for the benefits they should have realized, perhaps a year or more ago, had each section done their duty under this privilege—for privilege it certainly is as now perfected and offered to you.

It seems to us that a retail pharmacist has not learned the first principles of his business until he has become thoroughly aware that a fair, legitimate pharmacy business must be supported by margin rather than volume of business. Of course there are rare exceptions as there are to all rules; but if you discriminate closely you will discover they are mainly outside of what we define as "fair and legitimate." For instance, the illegitimate sale of liquors and the cut price system, which is the pirating of one upon many others, etc.

We must all admit we have departed far from this fundamental principle, when we have arrived at a position where it becomes necessary to sell a large portion of our merchandise practically at cost in order to prevent such pirating. The remedy lies only in organization, and *now* is the time to organize.

We have in President Canning a master mind, an efficient general, one who grasps the full situation and keeps the whole machinery running smoothly. During his first presidential year (which we trust will not be his last) he has devoted a large portion of his time to the work with persistent, untiring energy; and, what seems most commendable, this work has been done wholly in the general interests of the fraternity from an entirely unselfish motive, as his individual business is such that he has no-tone third the average interest in the benefits to be derived

Mr. G. W. Cobb, the first president of the newly formed organization, "Retail Druggists' Union," for the purpose of organizing the balance of the New England States under the "League Plan," has also devoted a large portion of his time the past year to the commendable work and is now laying plans for a systematic and thorough canvass of those sections not already organized. So many other persistent, energetic workers deserve equal credit for their part so well and faithfully done that it is hardly fair to mention names; but these two are mentioned, as a matter of information, on account of their official positions.

Now when the opportunity is offered will each druggist in the New England States second these gigantic sacrifices and efforts, come forward and do their part, and accept of the large remuneration to follow?

The close thinkers in the fraternity, as a rule, have seemed to arrive at the conclusion that redress from the vexed cut price problem must emanate from and be sustained by the manufacturers of proprietaries, and many have not familiarized themselves with the present movement sufficiently to be aware that this is the basis of the "League Plan."

The plan not only has the approval and general support of the manufacturer, but combines his pecuniary interest to the greatest possible extent, for, if carried out in its full extent, will in a great measure stop that fast growing and to him ruinous practice of substitution.

The plan also has the approval and support of the jobbers and combines their pecuniary interest to the extent that it recommends all outputs through the jobbing druggist only and all rebate privileges to stop with him also.

To this position some retailers at first objected; but the objection does not attach when the full situation is thoroughly understood Even if a person still holds to the position that it is a slight objection, do you expect so *great* a good without some small effort and sacrifice? And this movement, or any other, in order to be a perfect and thorough success, must combine the interests and good will of all the interested parties and invite the antagonism of none.

Let us for a moment examine into the advantages and disadvantages of this concession, which is the *one* only apparent objection to the whole plan. In the first place it puts all retailers, including cut price and apartment stores, upon an equal footing in all their purchases. Advantage No. 1. Do we hear any one say we lose the opportunity of saving 10 per cent. in our purchases?

Would any one claim for a moment that the average retail druggist ever purchases 10 per cent. of his merchandise direct? We think not, and this basis of figuring reduces the saving to 1 per cent. when applied to the *masses*, which is the correct standpoint, for we must sink individuality for the success of this magnificent cause. Now, compare this with the benefits of being placed upon an equal footing with the cut price and apartment stores, for fully competing with them in selling price, to say nothing of the 20 per cent. and upwards we will surely get by the re-establishing of prices. No, there is nothing valid in this objection when considered in its entirety.

You must not for a moment lose sight of the great necessity of joining the "League" after your local association is formed—not but that great good may be derived from local associations alone, but in order to insure perfect success in this movement we must make it national in its scope, then we can ask for anything in reason knowing it will be conceded whether it be with a perfect willingness or not. Besides, all the plans are laid and well laid for carrying out the work in detail, with competent heads to the different departments, and it only costs $1 a year for each member, which allows him to participate in all the benefits.

The "League Plan" combines all the necessary elements for success; the officers are the right men in the right places!

All we now lack is a complete branch in each county. Let us be able to report the accomplishment of this at the annual meeting in May.

We hope through the medium of the "Retail Druggists' Union" to offer the necessary aid to each county before that date; but should the contract be *too great* for the "Union," anyone can obtain all the necessary blanks and instructions by applying by letter to either G. W. Cobb, president, East Boston, or C. P. Flynn, secretary, South Boston.

Therefore, do not let the time pass without effecting a complete organization in your county and have a representation at the annual meeting of the "National League," of which due notice will be given in the pharmaceutical journals. The penalty of a neglect to do so may be a repetition of the past few years and perhaps even worse.

Respectfully submitted in aid of the good cause.

N. W. STILES,
President Apothecaries' Guild of Boston and vicinity.

BOSTON, April 7, 1894.

Boston.

William J. Cutler, formerly senior partner in the firm of Cutler Bros. & Co., Boston, died at his residence in this city on April 1 from heart disease. Mr. Cutler's death was particularly sad, he having assisted in a church service a short time prior to his going to his residence, where he was almost immediately stricken down with this malady. He was born in 1815 in Winchendon, Mass. About 1829 he came to Boston and entered the drug store of Lowe & Reed, Merchants' Row. The firm afterward moved to Chatham street, and Mr. Cutler was given a partnership, doing business under the name of Reed, Cutler & Co. The business was after a time moved to India street, and combined, by purchase, with that of Reed, Austin & Co. During the war the business was transacted at 109 Broad street, and it was subsequently moved to 89 Broad street, the present quarters of the firm of Cutler Bros. & Co. Mr. Cutler retired from the drug business two years ago last July. He was a member of the Wholesale Druggists' Association of Boston, a member and the second president of the Boston Druggists' Association, and a founder and director of the First National Bank of Boston. Upon the announcement of the death the Wholesalers' Association met and adopted the following resolution:

We are reminded by the very sudden and unexpected removal of our friend and associate, Wm. J. Cutler, from this life to that of the immortal life beyond, of the great uncertainties that surround us.

That as the active business representative of an honored house for many years, he was widely known and esteemed.

He was a living illustration of high devotion to the high principles which were the foundation of his faith and character and which dominated his life and conduct.

Therefore *Resolved:* That we, the wholesale druggists of Boston, unite in expressing our appreciation of the high character of the late William J. Cutler, and our sense of loss at his being taken from us.

That in the great mysteries of life we most sympathizingly commend his family to the Great All-Wise, who doeth all things well, and in whose keep-

ing our beloved ones are always safe, though for the while separated from us.

That these resolutions be transmitted by the officers of this meeting to the members of his family.

Resolved: That as a token of respect to the memory of our late associate, Wm. J. Cutler, we close our places of business during the hour of the funeral.

The above association also appointed a committee consisting of Messrs. Andrew G. Weeks, Benj. J. Wilson and Charles A. West to attend the funeral.

A special meeting of the Boston Druggists' Association was also held and Messrs. Thomas Doliber, Joseph Burnett, Nathaniel J. Rust and Theodore Metcalf were appointed to represent the organization at the funeral; the following resolutions were also unanimously adopted by a rising vote:

Resolved, That as members of the Boston Druggists' Association, as well as on behalf of the trade which we represent, we desire to place on record our appreciation of the life and character of William J. Cutler, a member of this association from its organization and at one time its president.

That we recognize the comprehensive and executive ability which characterized his faithful devotion to the public and private interests of his calling for more than sixty years.

That we gratefully bear witness to his firmness of purpose, his ready friendliness and helpfulness to others, his courtesy, his absolute integrity and his spotless character.

That we tender to Mr. Cutler's family our sincere sympathy in a sorrow which we share with them.

That a copy of these resolutions be furnished to Mr. Cutler's family and to the press.

Mr. Edward H. Cutler, a son of the deceased and a member of the firm of Noyes Bros. & Cutler, St. Paul, Minn., was summoned by telegraph and arrived in time for the obsequies, which were held at the New Jerusalem Church on April 5.

The pall bearers were: John Carr, president of the First National Bank; Gorham D. Gilman of Gilman Bros., representing the Wholesale Druggists; Theodore Metcalf, representing the Retail Druggists; David L. Webster of the Hide and Leather Bank, Judge Mason of the Supreme Court, Francis Dewson, Rev. Samuel N. Warren, Charles Reed.

The last meeting of the Boston Druggists' Association was known as "A Chestnut Night." The post-prandial exercises were inaugurated by President Babcock's reading of "Notes on Nuts," an original poem adapted to the occasion." A clever sketch, "The Chemist's Cat," revised and re-written up to date, was also read by the president. Henry Canning followed by reading "The Chemist's Boy." Anecdotes were then in order in which the following members participated: Thomas Doliber, Amos K. Tilden, Prof. Markoe, Henry M. Whitney, William A. Chapin, Henry Canning, Freeman H. Butler, C. B. R. Hazeltine and D. A. O'Gorman. A story founded upon David and Goliath was read by Mr. O'Gorman, which closed the exercises of the evening. Albert L. Wyman, J. Allen Rice and Charles W. Cheney were elected to membership at this meeting.

President Cobb of the New England Retail Druggists' League will soon acquire the cognomen of the lightning organizer. He made a trip to Northampton recently, and in almost less time than it takes to tell it he had effected an organization of the druggists of Hampshire County with officers as follows: President, Lucius Davis, Northampton; vice-president, C. J. Smith, Amherst; secretary, Henry Adams, Amherst; treasurer, L. Parsons, Northampton; directors—A. G. Cone, J. D. Smith and W. A. Coburn. Sixteen of the twenty-five druggists were present, and all will soon be enrolled in this body. It was voted to join the Interstate League as well as President Cobb's organization, the N. E. R. D. U. President Cobb is enthusiastic over the rapid way in which the organization is progressing. He has assurances that Haverhill druggists are developing an interest in the movement to such an extent that the whole county will soon be organized into one association.

March 29 ended a three days' session of the Massachusetts board of registration in pharmacy. Of the 43 applicants examined the following received certificates: William B. Milliken, Cambridge; William Hardie, Boston; Patrick A. Dolan, Natick; Ernest H. Bailey, Northfield, Vt.; Richard F. Smith, Lawrence; George H. Powers, Holyoke.

C. E. George, East Boston, will in the future serve his customers with soda drawn from the new onyx fountain "Boston," which he has purchased from James W. Tufts & Co.

F. M. Frost has opened a new store at Roslindale which is furnished with a Low Art Tile Co. fountain.

H. J. Bass, 165 Cambridge street, has a new Low Art Tile fountain.

Chicago.

The much agitated subject of cutting gives promise of an early solution if the views of some of the leading Chicago druggists as expressed to a representative of THE AMERICAN DRUGGIST AND PHARMACEUTICAL RECORD are to be backed up by intelligent and energetic work. The plan which they propose to put into operation is practically the same one that was suggested a few months ago by the representative of the Universal Trade Association of Detroit, N. Hayes, who visited this city on several occasions recently but who failed to make a favorable impression owing more to the fact that his plans were not well matured rather than a lack of interest or a suspicion that he was trying to involve the druggists in a scheme that would accrue to his personal benefit.

Later Mr. Hayes visited St. Louis where he endeavored to interest the pharmacists of that city in his plan. He was accorded a good reception by those he visited, but he seems to have made the same mistakes there that he made in Chicago—viz., soliciting subscriptions to the capital stock of the association and collecting money before he had organized for operation. In both instances he excited the suspicion of some of the more cautious druggists who without giving the plan due consideration denounced it and its promoter. The attention of the daily press was called to the matter and the papers gave Mr. Hayes a write up which characterized him as a fraud.

In presenting his plan to the Western pharmacists Mr. Hayes told them that it had the hearty indorsement of the leading manufacturers of the country. He also insisted that it was supported by the druggists of Detroit. A cursory investigation made by the Chicago Retail Druggists' Association and Mr. Thomas Layton, president of the St. Louis Apothecaries' Association, it is claimed, failed to substantiate Mr. Hayes' statements, and in the latter city the Universal Trade Association's plan was dropped like a hot potato.

The Chicago druggists were more favorably impressed, not with Mr. Hayes or his methods of introducing the plan but with the plan itself. They saw in it a scheme of considerable merit, and being anxious to adopt something that would better the condition of trade they gave the matter further consideration, which now promises to develop something tangible and practical in the direction of ameliorating business.

The Universal Trade Association is a concern capitalized for $1,000,000 whose headquarters are in Detroit. The objects of the association as set forth in their prospectus are as follows:

The Universal Trade Association is a corporation composed of retail druggists of this country for the purpose of manufacturing and selling patented labels such as are shown in the cuts hereunto annexed, to be employed on proprietary preparations. The control of these labels in the United States is to be delegated to an association of retail druggists, called the United Trade Society, into whose hands will be placed all the power necessary to put the plan into effect, and the supervision of the details of its practical operation.

Among those who became interested in the plan were Henry Goetz, Mr. Semple of Dale & Semple, E. Von Hermann, A. E. Ebert, and others of equal prominence. These gentlemen were instrumental in having the plan brought before the local association, where it met with some approval. Notwithstanding the apparently strong indorsements Mr. Hayes had exhibited it was thought prudent to make something in the way of a personal investigation before taking active steps, and Messrs. Goetz and Von Hermann were constituted a committee which visited Detroit a few days later. Here they found that little was known of the Universal Trade Association and Mr. Hayes.

Soon after their return Mr. Hayes was summoned to Chicago by the association, who had found in the mean time that he had been soliciting subscriptions and had met with considerable success in placing the stock of the association. Inquiries had also been coming in regarding the scheme and asking for advice about giving Mr. Hayes checks for shares. The majority of druggists approached by the promoter insisted on waiting until better evidence of success could be shown, and several hundred apothecaries are waiting to be enlightened on the subject.

Upon his return to Chicago Mr. Hayes offered to surrender to the Retail Druggists' Association all the funds he had collected together with the certificates of stock to be issued to subscriber. He also offered to send in the resignations of the National officers of the United Trade Association and allow retail druggists to be appointed in their places.

Mr. Goetz, secretary of the association, then took charge of the checks and certificates of stock. At the last regular meeting of the association a committee of ten was appointed to investigate the plan of the Universal Trade Association. This committee met Tuesday afternoon, April 3, and appointed ten delegates to attend the annual meeting of the Universal Trade Association at Detroit, April 11. It also appointed F. Von Hermann to visit the manufacturers of proprietary medicines in the East in regard to securing their co-operation. In Chicago they have been assured the hearty co-operation and support of the six leading jobbers, and should the plans upon which the local association are now working mature to the satisfaction of the committee in charge they confidently expect to have 95 per cent. of the Chicago retail druggists join them in their new fight against cutting. There are already 33 individual subscribers to the stock representing 200 shares.

Mr. Henry Goetz who has become deeply interested in the plan is somewhat enthusiastic on the subject. He insists that the transactions of Mr. Hayes which excited suspicion here and in St. Louis proceed rather from a lack of knowledge

of the proper methods of organizing, than from a desire to foist something upon the druggists which is questionable. As for his having the endorsement of the Chicago jobbers, Mr. Goetz is assured of that because Mr. Semple accompanied him.

The committee entrusted with the organization are inclined to think that the plan was not placed properly before the manufacturers, some of whom in answer to letters of inquiry from St. Louis spoke very discouragingly of Mr. Hayes and his scheme. If these manufacturers are willing to co-operate with the retail druggists and jobbers of the country in their efforts to do away with cutting it is thought that they will certainly give the plan a fair trial after it is perfected.

It has been urged by some that the manufacturers would not be willing to sink their individuality by using these labels again; that the labels could be erased or the numbers changed. These labels are to be pasted on the bottle with the number facing the glass, over this is pasted the manufacturer's label. In order to remove the U. T. A. label or make any change in it the two labels must be defaced.

To open several dozen packages for the purpose of destroying the labels would be a matter of no small expense to say nothing of the difficulty in selling the mutilated package. The committee have given this matter due consideration and they say they cannot see why the use of the label described should detract anything from the manufacturer's personality. At any rate the question as to the adoption of the plan will probably be settled in the course of ten days, in the mean time the local druggists are cutting each other's throats on proprietary articles and hoping for relief from some direction.

Mr. T. C. Ballard of Morrison, Plummer & Co has been identified with this firm nearer sixteen years than six, as reported through an error in a recent issue of THE AMERICAN DRUGGIST AND PHARMACEUTICAL RECORD.

The factory of Norton Bros., extensive manufacturers of tin boxes and cans for druggists and manufacturers of proprietary medicines, which was destroyed by fire recently, is being rebuilt in Maywood, a Chicago suburb, and they will soon be in a position to fill all orders.

The Birney Catarrhal Powder Company are fitting up a handsome office in the New York Life building on La Salle street, and will take possession about May 1. Their business has more than doubled during the last year necessitating extensive preparations for manufacturing on a large scale, which are also being made.

The Ash Soda Fountain Company, 207 South Canal street, are turning out some very handsome designs for fountains ordered early in the season and are already far behind their orders. The success of the improvements recently adopted have induced them to make preparations for greatly extending their business next year.

It is said that a number of catarrhal powders have been listed by a society that is waging war on the misuse of narcotics, and it is proposed to fight the firms manufacturing them to the bitter end. Statistics of insane asylums, sanitariums and hospitals, they claim, show an alarming increase in the use of these powders, not for catarrh but as narcotics. Investigations made show that these powders are largely composed of cocaine and by their constant use thousands of people are acquiring a habit that it is almost impossible to break.

Nathan Lapp, a druggist at the corner of Wabash avenue and Thirteenth street, recently witnessed an interesting experiment in mind reading performed in his store. A "Professor" Wilkins, who hails from one of the rural districts, came into the drug store blindfolded and accompanied by a committee who had picked out the store. The mindreader was to compound a prescription secured by the committee from a physician of its own selection. Taking the druggist's hand in his own the "Professor" began the search for pulverized capsicum. After twenty minutes' fruitless work he decided that Mr. Lapp was not able to concentrate his mind sufficiently. A drug clerk was then taken in hand and in a few minutes the "Professor" had found the right bottle. He next took from the shelf a bottle of belladonna extract, a bottle of gentian, some nux vomica and compound extract of colocynth. The combination proved to be the right ingredients according to the prescription and the test was pronounced a success.

New York.

The agitation of the Kings County Pharmaceutical Society of the telephone matters has stirred up the telephone monopoly in a most inspiring manner. The committee composed of President A. H. Brundage and Messrs France, Werner and Muir appeared before a joint committee at Albany two weeks since as reported exclusively in this paper at the time. The Erie County (Buffalo, N. Y.) Association were also ably represented, and the testimony given was of a most convincing kind. The telephone company were given two weeks in which to file an answer, and at the session of the committee last week the company's adherents endeavored to brow-beat and attack the character of the persons who appeared as remonstrants against the bill In fact Frank Gardner, clerk of the board of trade, has been threatened with a suit by the committee on lamp lighting and electricity on the charge of discourtesy to the legislature. This indicates the weakness of the company. It is an open question, however, whether the bill will not be smothered in committee.

Harry Chambers, the well-known and popular New York representative of J. M. Maris & Co., recently had a call from a party who claimed to be a warm personal friend of an old customer of Harry's from the far West. He arrived at the office of the Maris Co., 20 College place, New York, in a carriage, and after introducing himself stated that he was desirous of seeing the sights of Gotham under Mr. Chambers' guidance. On being informed that Mr. Chambers was out, he announced his intention to call later. He had evidently enjoyed himself in the interval, for upon his return to the office he ordered a basket of champagne and a full course dinner; being unable to obtain these things and meeting with rather a cold reception he departed somewhat provoked, and instead of reentering his carriage invited the driver to go inside while he mounted the box and drove off. The stranger's little exhibition of wild Western ways was funny while it lasted and provoked a good deal of merriment in the usually quiet precincts of College place.

The regular monthly meeting of the New York branch of the Interstate League at Mott Memorial Hall on Friday afternoon, April 7, was unusually well attended. The secretary announced that fourteen new names had been added to the list of signatures on the petitions, making a total of about 400. The president read a letter from C. O. Rano, president of the State Pharmaceutical Association, on the bills affecting pharmacists which are now before the legislature. These bills were also read, and after some discussion the Saxton bill, regulating the sale of morphine, chloral, etc., and the Douglas bill, prescribing the use of fluted bottles for all poisonous liquids, were condemned. Messrs. Kress, Bender and Molwitz were appointed a committee on excise to confer with the Grocers' Union on the subject of license legislation with power to act. The president was authorized to employ a canvasser to solicit new members.

Extensive alterations are going on in the pharmacy occupied by W. G. Moffat under the Astor House. The premises were formerly owned by A. J. Ditman of Sea Salt fame. It is Mr. Moffat's intention to spend at least $7,500 in refitting the store. A soda fountain to measure 18 feet long has been ordered from the John Matthews Apparatus Co., and the Kinnear & Gager Co. will put in a new steel ceiling. It is expected that these alterations will result in a very attractive store.

Prof. Virgil Coblentz of the New York College of Pharmacy has been devoting his spare time during the past two years to the elaboration of notes as a basis for a work on galenical pharmacy. The demands on his time made by the work done on the pharmacopœia last year have delayed him considerably in the work on the book, but from present indications the work will probably be ready for delivery by the opening of the next college session.

The druggists of West Hoboken are developing an unusual amount of enterprise. One prominent pharmacy on Washington street now keeps open all night and there are rumors of others who are about to follow this lead. How West Hoboken supports allnight pharmacies is a mystery.

"Jack" Rogers, the popular representative of Evans & Sons, Limited, Montreal, visited this city on his honeymoon last week, returning to Montreal on Monday last. Many of his old friends were right glad to see him to wish him every happiness.

Geo. Rosenson & Co. of 775 Columbus avenue have dissolved partnership. Is. Ullmann of the firm will continue the old business. Mr. Rosenson has bought out the People's Drug Store formerly owned by D. W. Brown of Jackson.

Thursday, April 26, is the date set for the commencement exercises of the New York College of Pharmacy. The diplomas will be awarded in the Carnegie Music Hall, 57th street and Broadway.

A. J. Ditman has been successful in the suit brought by him recently against a former partner to decide his title and rights to the exclusive control of the manufacture of Ditman's Sea Salt.

Peter Lance, the popular Eastern representative of Wm. R. Warner & Co., Philadelphia, is back in New York from an extended trip through the Eastern States.

George J. Seabury of Seabury & Johnson has left New York for Hot Springs, Arkansas, where he will spend a much needed vacation.

A pharmacy has been opened at Summit avenue and Irving street, Jersey City Heights, by Dr. Meyers.

Brent Good of Carter's Little Liver Pills fame is spending a few days in Montreal.

Pepsin Tablets.

No druggist need be told of the salable properties of Pepsin Tablets. They are used alike by physicians, pharmacists and the laity. To meet the demand for a low priced, first class, pepsin tablet the NewYork & Chicago Chemical Co., 96 Maiden Lane, New York, are now supplying a special 3 grain tablet packed in screw cap cover bottles at $1.25 per dozen. These are most attractively gotten up and may be relied upon to possess the full digestive strength of official pepsin. If the retailer really wishes to handle a salable speciality it would be well for him to try a sample lot of the pepsin tablets which he can get from any wholesale druggist or direct from the New York & Chicago Chemical Co., 96 Maiden Lane, New York.

Modern Business Methods.

The growth and development which comes to a business firm as a result of employing modern methods of extending business are clearly marked in the case of C G. Bacon & Co., wholesale druggists, 20 College Place, New York. There is pleasure in dealing with a house which considers attention to the needs of customers its first duty, and it is only in the nature of things that attentions of this kind should meet with the great increase of business which has followed their upright methods in dealing and sagacious enterprise in extending their connections. The firm has found it necessary to make considerable alterations in their business premises and C. G. Bacon & Co. have now one of the handsomest, most commodious and convenient establishmeats to be found among the wholesale and manufacturing drug trade of this city.

The special advertisement of C. G. Bacon & Co. which appears in this issue affords a good opportunity for druggists to open new accounts with that excellent firm. This opportunity should not be neglected. The firm of C. G. Bacon & Co. is an old established one whose standing and reputation in wholesale drug circles is of the very highest. Write to them at 20 College place, New York.

Some Special Bargains.

Read the special offer of the Dawes Mfg. Co. on another page in this issue if you need anything in the way of shop bottles.

Some of the special styles of bottles made by this firm are shown in the advertisement. The new round tincture *free from mold marks* combines the luster of the old style blown bottle with the accuracy of outline of modern mold work.

Before purchasing be sure to write to the Dawes Mfg. Co., Pittsburgh, Pa., for illustrations and descriptions of their line of shelf ware, mentioning this journal.

Read the New Advertisements.

This issue of THE AMERICAN DRUGGIST AND PHARMACEUTICAL RECORD contains seventy-two pages of reading matter and advertisements; of the latter the following are new:

The Dawes Manufacturing Company, *Druggists' Sundries and Glassware.*
M. C. Stone, *Paper Straws.*
C. G. Bacon & Co., *Special Offer.*
O. & W. Thum, *Fly Paper.*
Neidlinger Bros., *Syringes and Druggists' Sundries.*
H. K. Mulford Company, *Tablet Machines.*
A. R. Elliott, *Advertising.*
Empire Syringe Company, *Fountain Syringes.*
The Pharmacy Company, *Soap.*
C. B. Smith & Co., *Jobbing and Manufacturing Pharmacists.*
E. L. Patch Company, *Novus Lemonade and Lithia Tablets.*
J. D. Shearer Company, *Paper and Papeteries*
N. Y. & Chicago Chemical Company, *Pepsin Tablets.*
Thurston Chemical Company.

Notes on Prices.

Piperazine Prices.

W. H. Schieffelin & Co. call attention in a recent circular to the following revision in prices of Piperazine-Bayer, prepared by the Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany:

Piperazine-Bayer:		
In one-half ounce and one ounce vials	per oz.	$4.25
In lots of twenty ounces	"	3.80
In lots of ten ounces	"	3.50
Piperazine-Bayer Tablets:		
In tubes of ten tablets (each tablet containing 16 grs.)	per tube	$1.50
In lots of thirty tubes	"	1.35
In lots of sixty tubes	"	1.25

Wholesale Druggists' Prices.

We note below the important changes which have taken place during the past fortnight in the prices at which retailers purchase goods in ordinary lots:

ALCOHOL is quoted $2.36 @ $2.50 according to quality and quantity.

CHRYSOPHANIC ACID is a little easier at 25 @ 28c.

COD LIVER OIL is stationary. Gallon lots and upward are quoted $1.25.

ELECAMPANE ROOT is lower owing to arrivals; 12 @ 15c. represents the market.

GOLDEN SEAL owing to arrivals and an easier market is lower. We quote the range at 30c. @ 35c.

GOLD THREAD prices are revised to 35 @ 40c.

LUNAR CAUSTIC is lower in sympathy with the metal. The present price is 55 @ 60c.

MENTHOL has advanced to 40 @ 42c.

MERCURY is in less firm position and prices have receded to 60 @ 65c.

MERCURY BINIODIDE is lower at 28 @ 30.

MERCURIAL OINTMENT is lower in sympathy with the other preparations of mercury, and is now quoted 52 @ 55c. for 50 per cent. and 43 @ 45c. for ⅓ mercury.

MORPHINE is stronger, and prices have advanced since our last report. Acetate is now quoted $2 60. and the range for sulphate is $2.35 @ $2 60.

PIPERAZINE prices have undergone a material change. The prices are now uniform for the two leading brands, which we quote at $4.25 for half and one ounce vials, and at $3.50 in lots of twenty ounces. This change was noted in our issue of March 1, but through an inadvertence in reprinting an advertisement in which the previous prices were quoted there has arisen some confusion in the minds of the trade, hence the repetition of the notes this week

PHOSPHORIC ACID is also easier and is now quoted 75 @ 80c.

PROLIGNEOUS ACID is in demand and firm at 38 @ 50c.

POND LILY ROOT, yellow, is easier, and we now quote the range at 20 @ 25c.

SILVER NITRATE has declined with lunar caustic, and is now quoted 55 @ 60c.

TONKA BEANS are becoming scarce, and $2.05 @ $2.25 is asked.

WOOD NAPHTHA has declined to $1 @ $1.10.

Review of the Wholesale Market.

NEW YORK, April 11, 1894.

It should be understood that the prices quoted in this report are strictly those current in the wholesale market, and that higher prices are paid for retail lots. The quality of goods frequently necessitates a wide range of prices.

The past week has been a quiet one among the jobbing druggists and importers, the condition of the market reflecting no change from previous reports of the situation. Small lots of the several lines have continued to find a fair consuming outlet, but interior buyers yet show a hesitation to place orders for stock in excess of absolute necessities. Considering the general quietude, market values are as a rule well sustained. Opium has further declined and values may be said to be nominal. For quinine there continues a quiet market. Alcohol has been reduced by the Trust managers. The important fluctuations are noted below as follows:

ADVANCED.	DECLINED.
Cacao butter.	Alcohol.
Dragon's blood.	Bichromate of potash.
Nitrate of soda.	Cubeb berries.
Oil of peppermint	Ergot.
Shellac.	Oil of wintergreen.
Snake root.	Opium.
	Quinine.

DRUGS.

ALCOHOL has been lowered by the Trust managers to $2.18 @ $2.22, which brings the price down to the limit of outside competition. The net price of Trust produce after deducting rebate is about $2.05 for lots of 10 barrels.

BALSAM COPAIBA is improving in position and the tone of the market is stronger. Recent arrivals of Para are offered at about 34c. We quote the range at 33 @ 40c.

BALSAM FIR, Canada, is quiet but as the stock is well controlled by jobbers there is no urgency to realize; supplies now offer at $3.50 @ $3.70.

BALSAM TOLU meets with little inquiry though there is no quotable change in value. We quote the range of prices at 24 @ 27c. as to quantity, quality and seller.

BARK, Caseara Sagrada, is somewhat scarce and 6c. is generally asked.

BALSAM PERU is scarce and firm and prices are maintained with a fair show of firmness at the quoted range, $1.65 @ $1.70.

BUCHU LEAVES, short, continue in fair jobbing inquiry with a preference extended for the better grades.

CANTHARIDES, Chinese, are offering freely at a decline on the previous range, 25 @ 26c. being generally asked, though some of the trade refuse to shade 30c.

CACAO BUTTER continues to reflect a quiet market and prices are less firmly maintained. Jobbing sales at 32 @ 32½c.

COD LIVER OIL, Norwegian, is meeting with a fair amount of attention from the trade and prices are steadier upon the basis of $28 @ $29 for limited quantity.

CHONDRUS (Irish Moss), has shown some action during the week. We note sales of some one thousand lbs. bleached at 11½c.

DRAGON'S BLOOD, in reeds, has advanced owing to scarcity. The small available supply is closely concentrated and held at 75c.

ERGOT, notwithstanding the reported strong statistical position at primary sources, is weak and neglected in this

market. Purchases of German can be made at 23c. and Spanish 27c.

GLYCERIN is dull and unsettled with prices nominal in consequence of active outside competition. Drums are nominally quoted 12c. and bbls. 12½c.

JUNIPER BERRIES have been in active request and we note sales of some 40 bags at 2½ @ 2¾c.

LYCOPODIUM is well maintained at 52 @ 56c., but no sales of consequence have transpired in the interval.

MENTHOL, owing to recent arrivals, is easier in price, but concessions do not appear to stimulate important action. We quote Japanese $4.50 @ $4.75.

OPIUM offers with freedom, but the tone of the market is weak, and no interest either of a speculative or legitimate character is extended. The uncertainty regarding tariff changes causes a feeling of hesitancy among buyers, so that there is a lack of confidence in the situation. Cases are quoted $2.50, and to arrive quantities obtainable at $2.50. Jobbing quantities may be obtained at $2.52½ @ $2.55; powdered is in small supply and maintained at $3.45 @ $3.50.

QUININE has sold down to 22½c. since our last report, but an advance on this figure is now firm owing to withdrawal of the goods offered at the low range quoted. Foreign fromoutside hands is quoted 23½c. @ 24c., though bids of 23c. cash would probably be obtained if submitted to some holders.

SENNA, Tinnevelly, is in good demand and numerous sales are reported. Strong advices from primary sources have brought about a firmer feeling, though prices are nominally unchanged at the quoted range.

TONKA BEANS are in limited supply and prices are firmly maintained at the previous range.

VANILLA BEANS continue in good jobbing request with numerous sales within the range of $6.50 @ $13.00 as to quality.

DYES.

CUTCH has continued quiet with prices steady. Prime quality bales held at 5¾c. @ 6c.

DIVI DIVI remains quiet at the nominal range, $55 @ $56.

GAMBIER is without important change. Steamer lots at the wharf are quoted 4 @ 4⅛c., while sail stock from store is maintained at the previous range of 4⅛c. @ 4¾c.

NUTGALLS, Blue Aleppo, are in moderate request with the current sales at the range of 13¾ @ 14¼c.

SUMAC is passing out in small quantities into channels of consumption at the range of $72 50 @ $77.50 for Sicily and $43 @ $47 for Virginia

CHEMICALS.

ACETATE OF LIME has met with a fair inquiry and we are reported numerous sales of gray at $1.50, though the nominal range is $1.55 @ $1.60. Brown is steady at 90 @ 95c.

ARSENIC, white, continues very scarce and the market is firm at 3¾ @ 4c.

BLEACHING POWDER remains quiet at nominally unchanged prices. German, spot, held at 2⅛c. and English 2¼ @ 2½c. as to quantity.

BLUE VITRIOL does not change from 3⅝ @ 3¾c. as to make and quality and numerous sales are reported at this range.

BRIMSTONE reflects a quiet and easy market; for best seconds $17.25 @ $17.50 is quoted.

CAUSTIC SODA has been in demand, and the distribution for the week has been of the usual volume. We quote the range at $2.50 @ $2.65 as to test.

CHLORATE OF POTASH offers more freely and at slightly easier prices. Sales of German crystals are reported at 13⅞c., English at 14⅛ @ 14¾c. Powdered is generally held at 14⅜ @ 14½c.

CREAM TARTAR continues to offer at 17½c. for powdered, at which figure a moderate sale is reported.

NITRATE OF SODA is offered sparingly, and prices are maintained with a considerable show of firmness. Holders are asking $2.20 @ $2.25 for spot goods, and for forward delivery $2.17½ @ $2.22½ is quoted.

QUICKSILVER continues in steady moderate demand, with the current sales at 45½ @ 47c.

OXALIC ACID is dull, with offers of stock at 6⅜ @ 6⅝c.

ESSENTIAL OILS.

ANISE is yet held at $1 45, though the trade requirements are very moderate at the moment.

CASSIA remains quiet, but there is no variation in prices. We quote the range at 85 and 90c.

CUBEB is selling in about the usual quantity to consumers, with the range quoted $1.50 @ $1.70.

LEMON is selling quite freely in a small way at $1.30 @ $1.65 as to brand.

PEPPERMINT, HGH, is offered in some instances at $2.80 @ $2.85; the principal holder refuses to entertain orders at $3 bulk. Western and Wayne County are firm at $2.30 @ $2.50 respectively, with an occasional advance demanded on these figures.

SASSAFRAS does not develop any action of consequence, and prices are firm at the previous range.

WINTERGREEN is yet held at $1.40 @ $1.50 for natural and 80 @ 87½c. for artificial.

GUMS.

ALOE, Curacao, is finding moderate sale with 2¾ @ 3c. representing the range.

ASAFŒTIDA is in better supply and offering freely at 15 @ 30c. as to quality. The outside limit is regular for strictly fancy goods.

CAMPHOR continues dull at 42 @ 43c. for domestic and 41c. for Japanese.

CHICLE is quoted at 24 @ 28c. as to holder, though some in the trade are willing to shade this price on a firm bid for quantities.

SENEGAL: sorts are finding a moderate sale at the range of 9 @ 9½c.

SHELLAC has continued firm and the present position of the article is regarded as favorable for an improvement in values. Prices are steady at the quoted range.

TRAGACANTH is maintained steadily at the range of 32 @ 56 cents for Aleppo as to quality and a fair distributive trade is reported.

ROOTS.

The movement in roots continues of a light and unimportant character with few features of interest to report.

ACONITE is firmly held at 11½ @ 12 cents for German with small sales at these figures.

DANDELION is steady and in moderate request at 7½ @ 8 cents.

GALANGAL continues held at 3½ @ 4c. with small sales at this range.

IPECAC continues dull, but the market is sustained at the previous range of $1.27½ @ $1.40.

JALAP is in liberal supply and selling from jobbers' hands at 22 @ 23c.

SARSAPARILLA, Mexican, is jobbing fairly at 9 @ 9¼c.

SENEGA continues held at 38½ @ 40c. The demand for purposes of export is good, but holders' limits exceed those of shippers, and the number of stock changes are limited in consequence.

SNAKE, Texas, is in small supply and firm at 35 @ 36c.

SEEDS.

CANARY, Smyrna, is quoted 2½c., though business is mainly of a jobbing character.

CARAWAY, Dutch, offers at 6½c., though important demand is absent.

CELERY is quiet but firm at 18 @ 19c.; jobbing sales.

MUSTARD is very firmly held in view of the continued favorable reports from the coast. For yellow California 4c. is generally asked, and brown 3¾c.

Druggists' Exchange.

Suitable notices of moderate length under this heading inserted one time free; for each additional insertion Fifty Cents. Write distinctly, on one side of paper only, and do not use postal cards.

POSITIONS WANTED.

WANTED.—Situation by registered pharmacist in Connecticut; 9½ years' experience; best references. Address "Quinine," 709 South Main street, Waterbury, Conn.—14.

ANY DRUGGIST in need of a thoroughly competent and sober clerk, a graduate P. C. P., unmarried; long experience in city and country, please address "Senna," care this office.—14.

DRUG CLERK, age 25, American, six years' experience, desires permanent position; reference, present employers. Address "Drugs," Box 424, Haverstraw, N. Y.—14.

WANTED.—Advertising matter of any kind; circulars, papers, bills, almanacs samples of merchandise to distribute from house to house, tack up signs, lettering fences, buildings, bridges, rocks, etc.; do any advertising you want in Mercer County; specialty made of Shenango and Mahoning valleys, the very beehive of industry; we make affidavit of work performed; give bond and references, when required, send samples explaining nature of work required; how much you have, for price and terms. Distributing and Mailing Agency, Sharon, Mercer Co., Pa.

POSITION WANTED.—One year's experience; age 18; speak German; strictly temperate; willing to work; satisfactory references. Address H. G. Cordes, 14 Second street, Troy, N. Y.

POSITION WANTED by senior clerk of N. Y. C. P. (22 years) with 4 years' experience, both city and country; can furnish very best of references. Address "Willing," care of this office.—15.

JUNIOR (24), with 8 years' experience, speaking English and German, desires position in or out of New York State; good references. Address "Kino," care of P. P. E. C., 41 W. 28th str et. New York.

WANTED SITUATION by a competent druggist in either wholesale or retail; large experience in both; good references. Address R. S. (Canadian diploma), Verdon, Mass.

POSITION WANTED by a Ph.G.; 6½ years' experience in good stores; licensed in New York State; best of reference and no bad habits. Address "Panax," care this office.

BUSINESS OPPORTUNITIES.

WHY NOT OWN RESPECTABLE and lucrative business in a large city and employ salesmen for surrounding towns; we will give exclusive territory for a quick selling business specialty to men of ability and small capital; the goods are necessary, and the periodical supplies yield permanent and profitable returns. Address "Profitable," care this office.—14.

FOR SALE.—Nice drug business; fine location; established 5 years; will take fair price cash; No. of store 380 State street, Bridgeport, Conn.

DRUG BUSINESS for sale at a bargain; proprietor has other business and will sell at sacrifice. Address S. W. Ferguson, Cooperstown, N. Y.—16.

AN EXCEPTIONALLY GOOD CHANCE for you to get a chemical education free; must have $1,000. For particulars address C. O. Myers, Centralia, Kan.

FOR SALE OR EXCHANGE.—Good paying drug store; expenses light. Address W. E. R., Windsor, N. Y.

Connecticut Notes.

George Valleau of Bridgeport, formerly of New York, has accepted a position in Booth's phaamacy on Main street, Bridgeport.

J. M. Whitney, class of '91, Michigan School of Pharmacy, has taken a position with H. Fisher & Sons at the Broad street store in Bridgeport.

Joseph V. Brennan, for many years city apothecary of Bridgeport, has been appointed assistant superintendent of the poor in the city named.

The engagement is announced of Miss Olive Wiggins of Bridgeport, Ct., to Harry W. Hyatt formerly of New York, but now of Bridgeport. Mr. Hyatt holds a position in Fisher's Park Avenue pharmacy.

Michigan Mention.

C. W. Ward is the successor of Ward & Wolfe, Detroit.

Detroit retail druggists will hold a banquet in the near future.

Waldron & Todd, at Jackson, will soon occupy new quarters in the Hurd House.

Gadding & Wilcox have succeeded the firm of W. E. Wilcox & Co. at Onondaga, Mich.

C. de Pree, formerly a drug clerk at Kalamazoo, has opened a drug store at Holland.

Tibbs' drug, store at Grand Rapids, has been moved from 153 Monroe street to 618 S. Division.

George L. Rush, a Bay City druggist, was last week elected recorder of the city on the Republican ticket.

Fire destroyed the business section of Shaftsburg last week. The store and drug stock of G. A. Kay was burned.

Edward Blum, druggist at Detroit, has been appointed to a lucrative position in the United States appraiser's office.

Nelson Baker & Co., Detroit, are building a two-story addition to their laboratory which will be used as a pill department.

W. A. Rudell and S. Zellar have purchased an interest in the drug store of V. R. Conway, at Sault de Ste. Marie. The firm will hereafter be known as Conway & Co.

Frederick Stearns has petitioned the probate court at Detroit to be appointed administrator of the estate of Chicanori Tomohira, the young Japanese chemist who committed suicide.

W. H. Allen, formerly in charge of the chemical laboratory, department of pharmacy, Detroit College of Medicine, has been placed in charge of the new laboratory of Farrand, Williams & Clark.

J. D. White of White & White, druggists at Grand Rapids, committed suicide last week by shooting himself and cutting his throat. He left a letter saying that domestic troubles were the cause.

The Michigan Chemical Company was formed last week, and will engage in a general chemical brokerage business for this State and the West. The firm consists of John D. Vhay, William J. Vhay, and Edwin C. Eccleston. J. D. Vhay will act as manager.

A Detroit druggist has the following card in his window:

"We are right in it! Come in and wait for the car. Free use of telephone. Postal cards and stamps at cost. Cut rates on all drugs, what more can man want?"

Western.

It is rumored that Atkinson, Mo., is to have a soap factory.

E. O. Howard & Co. of Neola, Iowa, have dissolved partnership.

The firm of D. D. Harr & Co. of Klemme, Iowa, has been dissolved.

Hellickson & Collins have bought out the firm of Blexrud & Griezinger at Caledonia, Minn.

F. C. Hamen & Co. have succeeded to the business of L. D. Newton of Superior, Wisconsin.

A. G. Spohr of Mason City, Iowa, has taken in a partner, and the firm name is now Stewart & Spohr.

The firm of Robinson & Brooke is announced as succeeding Robinson & Stevens at Clear Lake, Iowa.

The safe of Brown's drug store, St. Louis, Mo., was recently blown open by burglars and $40 taken.

J. L. Cramer, for several years manager of a large drug store in Terre Haute, Indiana, has purchased the B. G. Ridgway stock of goods at Cedarville, O., and intends running a first-class drug store.

Three druggists in the vicinity of Fort Sheridan, Ill., have been arrested under indictment for selling liquor without a license. It is hard on drug men to be thus interrupted in their magnanimous and philanthropic efforts to assuage the thirst of the suffering unfortunates on the government reservation.

Random Notes.

Chamber Bros. of Seward have moved their drug store to Germantown.

A. D. Henline has bought the drug business of A. J. Shephard at Kearney.

J. J. Frater bought a drug stock at Blair and removed it to David City.

R. J. Joiner has succeeded to the business of R. W. Jones at La Crosse, Fla.

T. C. Kunkel has purchased a new drug stock and opened up at Weeping Water.

D. H. Kellogg & Son of Oakland, Cal., are reported to have given a bill of sale for the store.

Dr. W. H. Wilson, a Table Rock, Cal., druggist, was severely injured by being thrown from his buggy.

Paul Lehrack is back on duty again in Heilman's drug store at Tecumseh, Neb. He has been out with a broken leg.

With a capital stock of $25,000 the Minneapolis Furnace Company of Minneapolis filed articles of incorporation.

The harvesting of the slippery elm crop is now proceeding rapidly, and promises to equal, if not excel, those of former years.

F. H. Hainert is president of the Hainert Drug Company of Minneapolis, incorporated recently with a capital stock of $20,000.

C. B. Fuqua of the City drug store, Big Rapids, Mich., has sold his stock to Geo. W. Wilner, who will consolidate the same with his own.

E. Beach, manager of Dr. Morris's drug store at McCool Junction, Neb., recently died of lung fever. The remains were taken to Valparaiso for interment.

J. D. White, aged 65, father of W. L. White, a well-known druggist and military man of Grand Rapids, committed suicide to-day by cutting his throat. Domestic trouble induced despondency and led to the deed.

C. W. Hull, a Center avenue druggist, Bay City, Mich., who gave a chattel mortgage on his stock to Williams, Davis, Brooks & Company, a few days ago, has retired from the business. He is succeeded by Huyck & Ritchie.

Geo. Griffith, a young man of Des Moines, Ia., after quitting the service of John Sandholm, a druggist of Kirkwood and failing to secure employment, took thirty-five grains of morphine and sank peacefully into repose.

John B. Bond, Jr., a son of the widely-known and respected Dr. John B. Bond, of Little Rock, Ark., has purchased the Haliburton drug store in Little Rock and will conduct it as a first-class pharmacy under the firm name of John B. Bond, Jr., & Co.

Frank H. Lalor, druggist, 10 Warren street, Trenton, N. J., has been nominated for postmaster of Trenton by President Cleveland. This is a compromise after a long and bitter fight for the place in which the United States Senators from New Jersey took part. Confirmation will no doubt follow promptly.

Frank Bonheim, Atkinson, Kan., the druggist, who rooms at his store, was taken ill at 4 o'clock this morning, and took an overdose of a poisonous drug in his desire to secure immediate relief. The effects of the medicine soon became apparent and Bonheim did some walking that would have been creditable to a professional pedestrian. The effects were soon overcome.

Boards and Societies.

NEW JERSEY BOARD OF PHARMACY.—A regular meeting for the examination of applicants for registration will be held in Franklin Hall, cor. Warren and Montgomery streets, Jersey City, on Friday, April 20. Particulars can be had by addressing the secretary, Albert S. Elwell, Bridgeton, N. J.

FLORIDA STATE BOARD OF PHARMACY.—The Florida State Board of Pharmacy will convene in Tampa on May 16 for the examination of persons desirous to be registered. For further information write to Secretary Ed. Delouest, Ocala, Florida.

KINGS COUNTY PHARMACEUTICAL SOCIETY.—The next regular meeting of this society will take place in its meeting room at 399 Classon Avenue on Tuesday, April 10, 1894, at 2.30 P.M. A paper will be presented on "The Choice of Excipients for Special Substances," by J. F. Golding. "The Telephone Matter"—what has been and may be done on it will be told by Messrs. Werner, Muir and France. An automatic telephone in full operation will be exhibited and explained. A paper will be presented on "How Adulterations in Drugs may be Discovered by the Microscope." Illustrated by specimens, under 15 microscopes, by J. H. Hunt, B.S., M.D., assisted by Drs. Jellieffe, Golding and Mangan, Messrs. Schimpf, Anderson and Lohness. It is the aim to make the society helpful to every pharmacist, a medium for exchange of ideas and experiences, and for thoughtful consideration of proper methods of co-operation.

Trade Notes.

A free sample of fine linen writing paper and envelopes can be secured by any reader of this paper who will put his name on a postal card and send it to J. D. Shearer Co., Pittsfield, Mass., who are the original manufacturers of Linens, Ivorines, Irish Bond, English Parchment and many other well known descriptions of fancy stationery.

The E. L. Patch Co.'s line of 10 cent novelties which comprise "Novus Root Beer Tablets," "Novus Lemonade Tablets," "Novus Headache Tablets," "Novus Headache Powders," and "Compound Coltsfoot Cough Tablets," or "*Stop that hack*," represents one of the most profitable little side lines it is possible for a druggist to sell. They are neat and cleanly to handle, and need only be placed on show to sell. If you are not already familiar with the E. L. Patch Co.'s preparations send for a catalogue to 91 Broad street, Boston, Mass.

The H. K. Mulford Co., manufacturers of compressed tablets, triturates, lozenges, etc., who are the patentees of the Crown Tablet Machine, have an announcement in this issue in which a cut is shown of the improved "Crown" as used by manufacturers. The H. K. Mulford Co. make tablet machines adapted to every size of tablet and requirement of the druggist. Those of our readers who are contemplating the addition of a tablet apparatus to their outfit will do well to write to H. K. Mulford Co. for prices and particulars, which they will very gladly send to any one mentioning this journal.

Premature Exposition Diplomas.

The attention of our readers is directed to the full-page advertisement of Seabury & Johnson, which appears on page 13 of this issue. The new advertisement is interesting from the fact that Seabury & Johnson have deemed it necessary to publish an official notification from the chairman of the Executive Committee on Awards of the World's Columbian Exposition regarding the issuance of alleged facsimiles of the engraved diplomas.

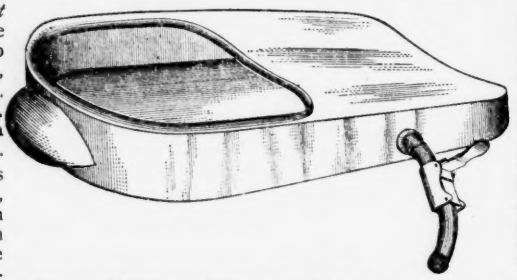
The Seabury gauzes are now sent out in patented containers with a view to preserving the antiseptic strength of the gauze. These containers were esteemed so highly by the judges of the World's Columbian Exposition as to receive a special reward.

Seabury's gauzes, like all goods of acknowledged merit, are widely imitated and it is necessary for druggists when ordering these goods to distinctly specify Seabury & Johnson's, and thus avoid substitutes. Samples of the different containers for distribution among physicians will be supplied to any readers of this paper. Those druggists who wish their names and addresses stamped on the boxes should state so when writing.

The Empire Syringe Co., 110 Fulton St., New York, advertise a three pipe Fountain Syringe which they claim to be the best article in the market. The price for gross lots of this syringe are remarkably low, especially as they offer to put up the goods under any brand desired. To prove that the article is worthy of being sold under the druggist's own brand the Empire Syringe Co. offer to send samples on request. Why not write for one?

Irrigation Bed Pan.

A. R. Gulick, 33 Herkimer street, Brooklyn, N. Y., is introducing the "Irrigation Bed Pan" as illustrated herewith. It is stated to be the invention of a prominent New York physician who recognized the need for some device of its kind in carrying out the details of antiseptic surgery. The pan is made of porcelain and has the following dimensions: Length, 15 inches; width, 19 inches; depth, 3 inches at back part, and at longitudinal center it gradually slopes down from 1½ inches to ¾ of an inch in the front part. The cover on the front part of pan is concave in cross section. There is a cylindrical extension or outlet on either side of



pan, as shown in figure, to which is attached a rubber tube, 3 feet in length, ½ inch in diameter, and provided with a patent shutoff. This tubing allows the free passage of all fluid discharges to a suitable reservoir on the floor, and when used as an ordinary or antiseptic vaginal douche an unlimited quantity of liquid can be used at one irrigation (capacity 3 quarts), so it is claimed there is no danger of soiling the bedding or clothing. The point is made that by removing the drainage tube and putting ordinary corks in the outlets it can be used as an ordinary bed pan. The price of the pan is placed at $3.50, and samples can be had at the above address.

A New Pocket Stove.

A small heater, called a "pocket stove," but designed to meet a variety of needs, has been invented by J. T. Ellis, of Newark, N. J. Within a neat, perforated nickel-plated box, one-fourth larger than our diagram, is a combustion chamber, surrounded with fine wire gauze, so as to admit air without releasing any ashes. From the center of this inner receptacle there rises a pin, on which, when the stove is to be used, one impales a piece of specially prepared fuel. This is a tiny round cake, composed of doubly calcined charcoal and other materials, the cohesiveness of which is aided by a few interwoven wires. It is nearly twice as large as an ordinary checker. You light this with a match; the removable cover of

the stove is now replaced and fastened with a rotary motion of the hand, and in two or three minutes the metal becomes so warm that you cannot hold it comfortably in contact with the bare skin, although it is not hot enough to scorch the most delicate fabric. For convenience in handling the maker provides an adjustable open-work rim that fits snugly around the outer face of the article. One cake, costing a cent or less, lasts about two hours and burns without smoke, flame or smell.

Chevalier of the Legion of Honor.

By commercial cable under date of April 3 we learn that the famous house of Ed. Pinaud of Paris has again been honored; and this time it is no less a distinction than the bestowing by the French Government on Victor Klotz, the head of the house of Ed. Pinaud, the title of Chevalier de la Legion D'Honneur. This great mark of governmental favor was conferred on Mr. Klotz for the grand exhibit at the Chicago Exposition, and for the superiority of the goods.

We extend to Mr. Klotz our hearty congratulations, as the honor is not an empty one, for the recipient of the Order of the Legion D'Honneur from the French Republic must have rendered great services in advancing either its manufacture or arts, or for some other meritorious achievements.

We have no doubt that the great house of Ed. Pinaud will now become more famous and more widely known than ever.

The Ice Crop.

It is generally conceded that the ice crop of the past winter is considerably below the average in amount as well as in quality, and that prices the coming summer will be higher than last year. This will not be because there will not be ice enough in the country for all needs, but on account of the uneven distribution of supplies which will necessitate importations from distant places as the season advances. The mere cost of cultivating and storing ice does not average over twenty cents per ton where the facilities for harvesting cheaply are available. What makes ice expensive to the consumer is the cost of transportation by water and rail, especially the latter; the waste in transit from the place of production and the additional shrinkage in local storehouses and in the process of delivery in wagons.

These conditions constitute serious obstacles to low-priced ice, and they will be encountered this season over a wide area of country. From the best sources of information accessible it appears that in all the States south of the Pennsylvania line the ice crop has been a complete failure, while in those in the latitude of Pennsylvania, including Ohio, Indiana, Kansas, Iowa and Illinois, and north to Michigan and Wisconsin, the crop is considerably short and of inferior quality, as, indeed, it is also in Connecticut and Rhode Island. The deficiency in these sections, which it is well known constitute the most densely-populated portion of the country, will have to be brought by rail or water from the colder climates of the northeast and northwest; so that the main question for consumers the coming summer will be one of price.

Fortunately, ice factories have increased rapidly in all the States where the natural ice crop is uncertain, and these sources of supply will do much to keep down prices, unless, indeed, the two rival branches in the trade should combine against the interests of consumers, which is the danger to be feared. Taking a general survey of